STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 139983

TO: Terra Gibbs
Location: REM-2D10/2C18
Art Unit: 1635
Thursday, December 09, 2004
Case Serial Number: 09/661658

From: Paul Schulwitz
Location: Biotech-Chem Library
REM-1A65
Phone: (571)272-2527

paul.schulwitz@uspto.gov

Search Notes

Examiner Gibbs,

See attached results.

If you have any questions about this search feel free to contact me at any time.

Thank you for using STIC search services!

Paul Schulwitz
Technical Information Specialist
STIC Biotech/Chem Library
(571)272-2527

SCORE OVER LENGTH SEARCHES

Attached is a score over length search. This search was developed to overcome limitations in most standard search systems which favor large sequences with high scoring, but lesser overall identity over smaller sequences with higher overall identity. This search is especially useful for relatively small nucleic acid or polypeptide target sequences (antisense, fragments, probes, primers, RNAi, epitopes, haptens, etc.) claimed functionally via a form of hybridization and/or identity language and having defined upper and lower polynucleotide and or polypeptide length limits.

The score over length search is performed by first running the query sequence using examiner-specified identity and polynucleotide or protein length limit parameters, and saving 65,000 hits and 0 alignments from each desired database. The resulting output is reformatted using a Microsoft Word macro and is imported into Excel. The summary table data are then sorted by the ratio of score of each hit sequence divided by its length and the accession numbers for all hits below the examiner's desired score over length parameters are deleted. The remaining accession numbers are used to pull the corresponding sequences from the databases into subdatabases enriched for good hits and the query sequence is re-run against these subdatabases to yield the final results.

The score over length cutoff for this search is ____.

Examiner Please Note: This cover sheet should be included when submitting results to be scanned.

12/1 OSP

Schulwitz, Paul

From: Gibbs, Terra
Sent: Wednesday, December 01, 2004 11:00 AM
To: Schulwitz, Paul
Subject: Sequence search request...

Hi Paul,
I have another request for a score over length search:
I need a length limited nucleotide sequence search of SEQ ID NO:2 in USSN 09661658, where the returns are rank ordered based on the score over length/ratio as we've discussed. I need the lengths limited to hits between 8 and 100 nucleotides, and I'll take as many hits as you can import into excel (64,000?), and alignments for anything above .75 on the above ratio. Hope this is clear, please call me if it's not. I also need the interference databases searched.

Terra Cotta Gibbs, Ph.D.
Art Unit 1635
Remsen Building 2D10
Mailbox 2C18
571-272-0758

12/2 10-16

rge rng rni rnpb rnpm rnpn
35 183 27 14 78

OM nucleic - nucleic search, using sw model

Run on: December 9, 2004, 17:22:29 ; Search time 0.001 Seconds
(without alignments)
854.120 Million cell updates/sec

Title: us-09-661-658-2
Perfect score: 131
Sequence: 1 gcctgagtataaggtgactt.....atgcctaacgactatcccttt 131

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

Searched: 174 seqs, 3260 residues

Total number of hits satisfying chosen parameters: 348

Minimum DB seq length: 8
Maximum DB seq length: 100

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 183 summaries

Database : rngdb:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	82	62.6	82	1	ABN83051	GpITh1P6.131 aptam
2	82	62.6	82	1	AAL43067	Regulatable, catal
3	82	62.6	82	1	AAL43090	Regulatable, catal
4	82	62.6	82	1	ADQ96971	T4 theophylline-de
5	82	62.6	82	1	ADQ96997	Theophylline-depen
6	80	61.1	82	1	ABN83053	Group I P6 aptazym
7	76	58.0	94	1	AAL43048	Regulatable, catal
8	76	58.0	94	1	ADA39564	RCANA construction
9	76	58.0	94	1	ADQ96955	RCANA GPITH1P6 mut
10	40	30.5	45	1	AAL43089	Regulatable, catal
11	40	30.5	45	1	ADQ96996	Theophylline-depen
12	31.8	24.3	40	1	AAA98320	RNA aptamer Th SEQ
13	31.8	24.3	42	1	AAQ89182	Theophylline affin
14	30.8	23.5	38	1	AAX90663	Short RNA aptamer
15	30.4	23.2	38	1	AAQ89171	Theophylline affin
16	30.4	23.2	40	1	AAQ89120	Theophylline affin
17	22.4	17.1	24	1	AAL43046	Regulatable, catal
18	22.4	17.1	24	1	ADA39562	RCANA construction
19	22.4	17.1	24	1	ADQ96953	RCANA GPITH1P6 PCR
20	16	12.2	21	1	ADQ96938	RCANA GPITH1P6 PCR
c 21	15.8	12.1	20	1	ABQ84377	DPP10 PCR primer #
c 22	15.4	11.8	20	1	ABQ77191	Human ABCC12 exon
23	15.2	11.6	20	1	AAV01286	Skeletal muscle so
24	15.2	11.6	20	1	ABZ86444	Human oligonucleot
25	15.2	11.6	20	1	ABD22674	Human myosin X-der
c 26	14.2	10.8	82	1	ABN83051	GpITh1P6.131 aptam
c 27	14.2	10.8	82	1	AAL43067	Regulatable, catal
c 28	14.2	10.8	82	1	AAL43090	Regulatable, catal
c 29	14.2	10.8	82	1	ADQ96971	T4 theophylline-de
c 30	14.2	10.8	82	1	ADQ96997	Theophylline-depen
c 31	13.8	10.5	18	1	ACF63061	Human progesterone
32	13.8	10.5	18	1	ACF63063	Human progesterone
c 33	13.8	10.5	18	1	ADB54669	Hybridisation olig
c 34	13.6	10.4	94	1	AAL43048	Regulatable, catal
c 35	13.6	10.4	94	1	ADA39564	RCANA construction
c 36	13.6	10.4	94	1	ADQ96955	RCANA GPITH1P6 mut
c 37	13.2	10.1	82	1	ABN83053	Group I P6 aptazym
38	12.8	9.8	16	1	AAS56827	Validation ribozym
c 39	12.8	9.8	17	1	ABT35681	Tumour suppression
c 40	12.8	9.8	17	1	ACC80518	m2CRE2 EMSA probe
c 41	12.8	9.8	17	1	ADB41555	Tumour suppression
42	12.8	9.8	17	1	ADD42040	Rice acetolactate
43	12.8	9.8	17	1	ADI49919	Human tumour suppr
c 44	12.8	9.8	17	1	ACC53993	Human tumour suppr
45	12.8	9.8	17	1	ADI84100	HCV DNAzyme substr
c 46	12.4	9.5	15	1	AAT54644	Mouse IL-5 hammerh
c 47	12	9.2	13	1	ABH36274	Oligonucleotide SE
48	12	9.2	13	1	ABH36275	Oligonucleotide SE
49	12	9.2	15	1	ABI99108	Human PCDH2 ASO PC
50	11.8	9.0	15	1	AAX31622	Tag sequence of a
c 51	11.8	9.0	15	1	AAZ62880	Substrate for HH r
c 52	11.8	9.0	15	1	AAF47620	IGFBP3 oligonucleo
53	11.8	9.0	15	1	ABK32576	Human pancreatic c
c 54	11.8	9.0	15	1	ABX00731	Hepatitis C virus
55	11.4	8.7	13	1	ABC28016	Oligonucleotide SE
56	11.4	8.7	13	1	ABC53209	Oligonucleotide SE
57	11.4	8.7	13	1	ABF13691	Oligonucleotide SE
58	11.4	8.7	13	1	ABC35896	Oligonucleotide SE
c 59	11.4	8.7	13	1	ABC35897	Oligonucleotide SE
c 60	11.4	8.7	13	1	ABC13513	Oligonucleotide SE
61	11.4	8.7	13	1	ABF97213	Oligonucleotide SE
62	11.4	8.7	13	1	ABF50367	Oligonucleotide SE
c 63	11.4	8.7	13	1	ABH33765	Oligonucleotide SE
c 64	11.4	8.7	13	1	ABC53208	Oligonucleotide SE
65	11.4	8.7	13	1	ABC61347	Oligonucleotide SE
66	11.4	8.7	13	1	ABC13512	Oligonucleotide SE
c 67	11.4	8.7	13	1	ABF32342	Oligonucleotide SE
c 68	11.4	8.7	13	1	ABC61346	Oligonucleotide SE
c 69	11.4	8.7	13	1	ABF50366	Oligonucleotide SE
70	11.4	8.7	13	1	ABC81417	Oligonucleotide SE
71	11.4	8.7	13	1	ABH00081	Oligonucleotide SE
c 72	11.4	8.7	13	1	ABF58084	Oligonucleotide SE
73	11.4	8.7	13	1	ABF32343	Oligonucleotide SE
c 74	11.4	8.7	13	1	ABH01944	Oligonucleotide SE
c 75	11.4	8.7	13	1	ABH00080	Oligonucleotide SE
c 76	11.4	8.7	13	1	ABH02044	Oligonucleotide SE
77	11.4	8.7	13	1	ABF58085	Oligonucleotide SE
c 78	11.4	8.7	13	1	ABC28017	Oligonucleotide SE
c 79	11.4	8.7	13	1	ABH20654	Oligonucleotide SE
80	11.4	8.7	13	1	ABH33764	Oligonucleotide SE
81	11.4	8.7	13	1	ABH42900	Oligonucleotide SE
c 82	11.4	8.7	13	1	ABC81416	Oligonucleotide SE
c 83	11.4	8.7	13	1	ABF44034	Oligonucleotide SE
c 84	11.4	8.7	13	1	ABF94136	Oligonucleotide SE
85	11.4	8.7	13	1	ABF94137	Oligonucleotide SE
c 86	11.4	8.7	13	1	ABH01200	Oligonucleotide SE
87	11.4	8.7	13	1	ABF44035	Oligonucleotide SE
88	11.4	8.7	13	1	ABH20655	Oligonucleotide SE
c 89	11.4	8.7	13	1	ABF97212	Oligonucleotide SE
c 90	11.4	8.7	13	1	ABH42901	Oligonucleotide SE
91	11.4	8.7	13	1	ABH01201	Oligonucleotide SE
c 92	11.4	8.7	13	1	ABF13690	Oligonucleotide SE
93	11.4	8.7	13	1	ABH01945	Oligonucleotide SE
94	11.4	8.7	13	1	ABH02045	Oligonucleotide SE
c 95	11.4	8.7	15	1	AAT54959	Mouse relA hammerh
c 96	11.4	8.7	15	1	AAT57042	RSV 1C hammerhead
c 97	11.4	8.7	15	1	AAT57041	RSV 1C hammerhead
c 98	11.4	8.7	15	1	AAX65300	Mouse B7-1 hammerh
c 99	11.4	8.7	15	1	AAX65299	Mouse B7-1 hammerh
c 100	11.4	8.7	15	1	AAX31607	Tag sequence of a
c 101	11.4	8.7	15	1	AAF48426	IGFBP3 oligonucleo
c 102	11.4	8.7	15	1	AAF48427	IGFBP3 oligonucleo
c 103	11.4	8.7	15	1	AAF47618	IGFBP3 oligonucleo
c 104	11.4	8.7	15	1	AAF47619	IGFBP3 oligonucleo
c 105	11.4	8.7	15	1	AAF48425	IGFBP3 oligonucleo
106	11.4	8.7	15	1	AAS19622	ASO primer #1 to d

c 107	11.4	8.7	15	1	ABK32561	Human pancreatic c
c 108	11	8.4	12	1	ABI21898	Oligonucleotide pr
c 109	11	8.4	12	1	ABH80958	Oligonucleotide pr
110	11	8.4	12	1	ABI76786	Oligonucleotide pr
111	11	8.4	12	1	ABI17426	Oligonucleotide pr
112	11	8.4	12	1	ABI12345	Oligonucleotide pr
c 113	11	8.4	12	1	ABI48995	Oligonucleotide pr
c 114	11	8.4	12	1	ABI70304	Oligonucleotide pr
c 115	11	8.4	12	1	ABI19205	Oligonucleotide pr
c 116	11	8.4	12	1	ABI00255	Oligonucleotide pr
117	11	8.4	12	1	ABI04248	Oligonucleotide pr
c 118	11	8.4	12	1	ABH88751	Oligonucleotide pr
119	11	8.4	12	1	ABH83435	Oligonucleotide pr
c 120	11	8.4	12	1	ABI71223	Oligonucleotide pr
c 121	11	8.4	12	1	ABI70151	Oligonucleotide pr
122	11	8.4	12	1	ABI30589	Oligonucleotide pr
123	11	8.4	12	1	ABI39973	Oligonucleotide pr
124	11	8.4	12	1	ABH83015	Oligonucleotide pr
c 125	11	8.4	12	1	ABH86779	Oligonucleotide pr
126	11	8.4	13	1	ABC69069	Oligonucleotide SE
c 127	11	8.4	13	1	ABF05684	Oligonucleotide SE
128	11	8.4	13	1	ABC87292	Oligonucleotide SE
c 129	11	8.4	13	1	ABH22531	Oligonucleotide SE
c 130	11	8.4	13	1	ABF16585	Oligonucleotide SE
131	11	8.4	13	1	ABF17819	Oligonucleotide SE
c 132	11	8.4	13	1	ABF23104	Oligonucleotide SE
133	11	8.4	13	1	ABF31691	Oligonucleotide SE
c 134	11	8.4	13	1	ABC69068	Oligonucleotide SE
c 135	11	8.4	13	1	ABF46246	Oligonucleotide SE
136	11	8.4	13	1	ABF57605	Oligonucleotide SE
137	11	8.4	13	1	ABH10656	Oligonucleotide SE
c 138	11	8.4	13	1	ABH37264	Oligonucleotide SE
c 139	11	8.4	13	1	ABH03008	Oligonucleotide SE
140	11	8.4	13	1	ABC68529	Oligonucleotide SE
c 141	11	8.4	13	1	ABF39158	Oligonucleotide SE
c 142	11	8.4	13	1	ABH36296	Oligonucleotide SE
143	11	8.4	13	1	ABF64310	Oligonucleotide SE
c 144	11	8.4	13	1	ABF64315	Oligonucleotide SE
c 145	11	8.4	13	1	ABC44376	Oligonucleotide SE
146	11	8.4	13	1	ABH37001	Oligonucleotide SE
147	11	8.4	13	1	ABH37265	Oligonucleotide SE
c 148	11	8.4	13	1	ABF23810	Oligonucleotide SE
c 149	11	8.4	13	1	ABH19270	Oligonucleotide SE
c 150	11	8.4	13	1	ABF36568	Oligonucleotide SE
151	11	8.4	13	1	ABF36569	Oligonucleotide SE
152	11	8.4	13	1	ABH22530	Oligonucleotide SE
153	11	8.4	13	1	ABC44377	Oligonucleotide SE
c 154	11	8.4	13	1	ABC88333	Oligonucleotide SE
155	11	8.4	13	1	ABH17450	Oligonucleotide SE
c 156	11	8.4	13	1	ABF69632	Oligonucleotide SE
157	11	8.4	13	1	ABH03009	Oligonucleotide SE
c 158	11	8.4	13	1	ABF17818	Oligonucleotide SE
159	11	8.4	13	1	ABF46247	Oligonucleotide SE
c 160	11	8.4	13	1	ABC68528	Oligonucleotide SE
161	11	8.4	13	1	ABC29301	Oligonucleotide SE
162	11	8.4	13	1	ABF23811	Oligonucleotide SE
c 163	11	8.4	13	1	ABH10657	Oligonucleotide SE
164	11	8.4	13	1	ABF64314	Oligonucleotide SE
c 165	11	8.4	13	1	ABC29300	Oligonucleotide SE
166	11	8.4	13	1	ABC88332	Oligonucleotide SE
167	11	8.4	13	1	ABF23105	Oligonucleotide SE
c 168	11	8.4	13	1	ABF29060	Oligonucleotide SE
169	11	8.4	13	1	ABF39159	Oligonucleotide SE
c 170	11	8.4	13	1	ABH17451	Oligonucleotide SE
171	11	8.4	13	1	ABH19271	Oligonucleotide SE
172	11	8.4	13	1	ABF69633	Oligonucleotide SE
173	11	8.4	13	1	ABF69721	Oligonucleotide SE
c 174	11	8.4	13	1	ABF57604	Oligonucleotide SE
c 175	11	8.4	13	1	ABH37000	Oligonucleotide SE
176	11	8.4	13	1	ABF05685	Oligonucleotide SE
c 177	11	8.4	13	1	ABC87293	Oligonucleotide SE
178	11	8.4	13	1	ABF16584	Oligonucleotide SE
179	11	8.4	13	1	ABF29061	Oligonucleotide SE
c 180	11	8.4	13	1	ABF31690	Oligonucleotide SE
c 181	11	8.4	13	1	ABF69720	Oligonucleotide SE
182	11	8.4	13	1	ABH36297	Oligonucleotide SE
c 183	11	8.4	13	1	ABF64311	Oligonucleotide SE

ALIGNMENTS

RESULT 1
ABN83051
ID ABN83051 standard; RNA; 82 BP.
XX
AC ABN83051;
XX
DT 16-AUG-2002 (first entry)
XX
DE GpITh1P6.131 aptamer construct.
XX
KW Aptazyme; regulatable; aptamer; luciferase; cyclic AMP; ss; GpITh1P6.131.
XX
OS Unidentified.
XX
FH Key Location/Qualifiers
FT misc_binding 4. .9
FT /*tag= a
FT /bound_moiety= "Bases 33-28"
FT stem_loop 14. .24
FT /*tag= b
FT misc_binding 28. .33
FT /*tag= c
FT /bound_moiety= "Bases 9-4"
FT misc_binding 34. .35
FT /*tag= c
FT /bound_moiety= "Bases 79-78"
FT misc_binding 41
FT /*tag= d
FT /bound_moiety= "Base 72"
FT misc_binding 45. .46
FT /*tag= e
FT /bound_moiety= "Bases 68-67"
FT stem_loop 48. .62
FT /*tag= f
FT misc_binding 67. .68
FT /*tag= g
FT /bound_moiety= "Bases 46-45"
FT misc_binding 72
FT /*tag= h
FT /bound_moiety= "Base 41"
FT misc_binding 78. .79
FT /*tag= i
FT /bound_moiety= "Bases 35-34"
XX
PN WO200196541-A2.
XX
PD 20-DEC-2001.
XX
PF 15-JUN-2001; 2001WO-US019119.
XX
PR 15-JUN-2000; 2000US-00661658.
XX
PA (TEXA) UNIV TEXAS.
XX
PI Ellington AD, Hesselberth J, Marshall K, Robertson M, Sooter L;
PI Davidson E, Cox JC, Reidel T;
XX
DR WPI; 2002-090203/12.
XX
PT Aptazyme construct for detecting the presence of ligands, comprises a
PT regulatable Group I intron aptamer oligonucleotide with a regulatory
PT domain, and modulates their kinetic parameters in response to an
PT effector.
XX

```
PS   Disclosure; Fig 2A; 42pp; English.
XX
CC   The sequence represents the GpIThlP6.131 aptamer construct used in the
CC   invention. The invention relates to a novel aptazyme construct comprising
CC   a regulatable Group I intron aptamer oligonucleotide sequence having an
CC   allosterically regulatable regulatory domain, where the kinetic
CC   parameters of the aptazyme on a target gene vary in response to the
CC   interaction of an allosteric effector molecule with the regulatory
CC   domain, and the intron splicing reaction occurs in vitro. The aptazyme is
CC   useful: (1) in assays to detect the presence of ligands or to detect
CC   activation of an aptazyme by an effector; (2) in the identification,
CC   isolation and enhancement of allosteric effectors and of the
CC   allosterically regulatable aptazymes with which they interact; (3) to
CC   activate or repress a reporter gene (e.g. luciferase) containing an
CC   engineered intron in response to an endogenous activator; and (4) to
CC   monitor intracellular levels of proteins or small molecules such as
CC   cyclic AMP
XX
SQ   Sequence 82 BP; 24 A; 21 C; 16 G; 0 T; 21 U; 0 Other;

  Query Match             62.6%;  Score 82;  DB 1;  Length 82;
  Best Local Similarity   74.4%;  Pred. No. 1.8e-05;
  Matches   61;  Conservative   21;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         37 TAAACGGGGAACCTCTCTAGTAGACAATCCCGTGCTAAATTATACCAGCATCGTCTTGAT 96
              :|||||||||||||:|:|:||:||||||:||||:||:|||::|:|||||||:||:|::||:
Db          1 UAAACGGGGAACCUCUCUAGUAGACAAUCCCGUGCUAAAUUAUACCAGCAUCGUCUUGAU 60

Qy         97 GCCCTTGGCAGATAAATGCCTA 118
              ||||::||||||:|||:|||:|
Db         61 GCCCUUGGCAGAUAAAUGCCUA 82


RESULT 2
AAL43067
ID   AAL43067 standard; RNA; 82 BP.
XX
AC   AAL43067;
XX
DT   25-SEP-2002  (first entry)
XX
DE   Regulatable, catalytically active nucleic acid #2.
XX
KW   Regulatable catalytically active nucleic acid; RCANA; ribozyme;
KW   gene therapy; ss.
XX
OS   Unidentified.
XX
FH   Key             Location/Qualifiers
FT   misc_binding    4. .8
FT                   /*tag=  a
FT                   /bound_moiety= "binds nucleotides 33-29 of itself"
FT   stem_loop       14. .24
FT                   /*tag=  b
FT   misc_binding    29. .33
FT                   /*tag=  c
FT                   /bound_moiety= "binds nucleotides 8-4 of itself"
FT   misc_binding    34. .35
FT                   /*tag=  d
FT                   /bound_moiety= "binds nucleotides 79-78 of itself"
FT   misc_binding    41
FT                   /*tag=  e
FT                   /bound_moiety= "binds nucleotide 72 of itself"
FT   misc_binding    45. .46
FT                   /*tag=  f
FT                   /bound_moiety= "binds nucleotides 68-67 of itself"
FT   stem_loop       48. .62
FT                   /*tag=  g
FT   misc_binding    67. .68
FT                   /*tag=  h
FT                   /bound_moiety= "binds nucleotides 46-45 of itself"
FT   misc_binding    72
FT                   /*tag=  i
FT                   /bound_moiety= "binds nucleotide 41 of itself"
FT   misc_binding    78. .79
FT                   /*tag=  j
FT                   /bound_moiety= "binds nucleotides 35-34 of itself"
XX
PN   WO200196559-A2.
XX
PD   20-DEC-2001.
XX
PF   14-JUN-2001; 2001WO-US019302.
XX
PR   15-JUN-2000; 2000US-0212097P.
XX
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Ellington AD,  Hesselberth J,  Marshall K,  Robertson M,  Sooter L;
PI   Davidson E,  Cox JC,  Reidel T;
XX
DR   WPI; 2002-122216/16.
XX
PT   New regulatable, catalytically active nucleic acids (RCANA), useful in
PT   gene therapy (particularly for regulating gene expression), or in assays
PT   for detecting the presence of ligands or activation of an effector of
PT   RCANA.
XX
PS   Example 1; Fig 2A; 126pp; English.
XX
CC   The present invention relates to regulatable, catalytically active
CC   nucleic acids (RCANAs) which are regulated by polypeptides. These are
CC   useful for regulating gene expression, in assays for detecting the
CC   presence of ligands, for activation of an effector of RCANA, and in gene
CC   therapy. The present sequence is an RCANA described in the
CC   exemplification of the invention
XX
SQ   Sequence 82 BP; 24 A; 21 C; 16 G; 0 T; 21 U; 0 Other;

  Query Match             62.6%;  Score 82;  DB 1;  Length 82;
  Best Local Similarity   74.4%;  Pred. No. 1.8e-05;
  Matches   61;  Conservative   21;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         37 TAAACGGGGAACCTCTCTAGTAGACAATCCCGTGCTAAATTATACCAGCATCGTCTTGAT 96
              :|||||||||||||:|:|:||:||||||:||||:||:|||::|:|||||||:||:|::||:
Db          1 UAAACGGGGAACCUCUCUAGUAGACAAUCCCGUGCUAAAUUAUACCAGCAUCGUCUUGAU 60

Qy         97 GCCCTTGGCAGATAAATGCCTA 118
              ||||::||||||:|||:|||:|
Db         61 GCCCUUGGCAGAUAAAUGCCUA 82


RESULT 3
AAL43090
ID   AAL43090 standard; RNA; 82 BP.
XX
AC   AAL43090;
XX
DT   25-SEP-2002  (first entry)
XX
DE   Regulatable, catalytically active nucleic acid #22.
XX
KW   Regulatable catalytically active nucleic acid; RCANA; ribozyme;
KW   gene therapy; ss.
XX
OS   Unidentified.
XX
FH   Key             Location/Qualifiers
FT   misc_binding    4. .8
FT                   /*tag=  a
FT                   /bound_moiety= "binds nucleotides 33-29 of itself"
FT   stem_loop       14. .24
FT                   /*tag=  b
FT   misc_binding    29. .33
FT                   /*tag=  c
FT                   /bound_moiety= "binds nucleotides 8-4 of itself"
```

```
FT   misc_binding    34. .35
FT                   /*tag= d
FT                   /bound_moiety= "binds nucleotides 79-78 of itself"
FT   misc_binding    41
FT                   /*tag= e
FT                   /bound_moiety= "binds nucleotide 72 of itself"
FT   misc_binding    45. .46
FT                   /*tag= f
FT                   /bound_moiety= "binds nucleotides 68-67 of itself"
FT   stem_loop       48. .62
FT                   /*tag= g
FT   misc_binding    67. .68
FT                   /*tag= h
FT                   /bound_moiety= "binds nucleotides 46-45 of itself"
FT   misc_binding    72
FT                   /*tag= i
FT                   /bound_moiety= "binds nucleotide 41 of itself"
FT   misc_binding    78. .79
FT                   /*tag= j
FT                   /bound_moiety= "binds nucleotides 35-34 of itself"
XX
PN   WO200196559-A2.
XX
PD   20-DEC-2001.
XX
PF   14-JUN-2001; 2001WO-US019302.
XX
PR   15-JUN-2000; 2000US-0212097P.
XX
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Ellington AD,  Hesselberth J,  Marshall K,  Robertson M,  Sooter L;
PI   Davidson E,  Cox JC,  Reidel T;
XX
DR   WPI; 2002-122216/16.
XX
PT   New regulatable, catalytically active nucleic acids (RCANA), useful in
PT   gene therapy (particularly for regulating gene expression), or in assays
PT   for detecting the presence of ligands or activation of an effector of
PT   RCANA.
XX
PS   Example 5; Fig 25B; 126pp; English.
XX
CC   The present invention relates to regulatable, catalytically active
CC   nucleic acids (RCANAs) which are regulated by polypeptides. These are
CC   useful for regulating gene expression, in assays for detecting the
CC   presence of ligands, for activation of an effector of RCANA, and in gene
CC   therapy. The present sequence is an RCANA described in the
CC   exemplification of the invention
XX
SQ   Sequence 82 BP; 24 A; 21 C; 16 G; 0 T; 21 U; 0 Other;

  Query Match             62.6%;  Score 82;  DB 1;  Length 82;
  Best Local Similarity   74.4%;  Pred. No. 1.8e-05;
  Matches   61;  Conservative   21;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         37 TAAACGGGGAACCTCTCTAGTAGACAATCCCGTGCTAAATTATACCAGCATCGTCTTGAT 96
              :||||||||||||:|:|:||:||||||:||||:||:|||::|:|||||||:||:|::||:
Db          1 UAAACGGGGAACCUCUCUAGUAGACAAUCCCGUGCUAAAUUAUACCAGCAUCGUCUUGAU 60

Qy         97 GCCCTTGGCAGATAAATGCCTA 118
              ||||::||||||:|||:|||:|
Db         61 GCCCUUGGCAGAUAAAUGCCUA 82


RESULT 4
ADQ96971
ID   ADQ96971 standard; RNA; 82 BP.
XX
AC   ADQ96971;
XX
DT   23-SEP-2004  (first entry)
XX
DE   T4 theophylline-dependent intron -based RCANA GPITH1P6.133 #1.
XX
KW   RCANA; catalytically active regulatable nucleic acid; ss; ribozyme;
KW   aptamer; effector domain; nucleic acid catalyst domain; gene therapy;
KW   industrial biosynthesis; bioremediation; bacteriophage T4;
KW   thymidylate synthase; self-splicing intron.
XX
OS   Enterobacteria phage T4.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_binding    4. .8
FT                   /*tag= a
FT                   /bound_moiety= "Bases 33-29 of the present sequence"
FT   stem_loop       14. .24
FT                   /*tag= b
FT   misc_binding    29. .33
FT                   /*tag= c
FT                   /bound_moiety= "Bases 8-4 of the present sequence"
FT   misc_binding    34. .35
FT                   /*tag= d
FT                   /bound_moiety= "Bases 79-78 of the present sequence"
FT   misc_binding    41
FT                   /*tag= e
FT                   /bound_moiety= "Base 72 of the present sequence"
FT   misc_binding    45. .46
FT                   /*tag= f
FT                   /bound_moiety= "Bases 68-67 of the present sequence"
FT   stem_loop       48. .62
FT                   /*tag= g
FT   misc_binding    67. .68
FT                   /*tag= h
FT                   /bound_moiety= "Bases 46-45 of the present sequence"
FT   misc_binding    72
FT                   /*tag= i
FT                   /bound_moiety= "Base 41 of the present sequence"
FT   misc_binding    78. .79
FT                   /*tag= j
FT                   /bound_moiety= "Bases 35-34 of the present sequence"
XX
PN   US2004126882-A1.
XX
PD   01-JUL-2004.
XX
PF   24-SEP-2002; 2002US-00254568.
XX
PR   15-JUN-2000; 2000US-0212097P.
PR   14-SEP-2000; 2000US-00661658.
PR   20-SEP-2000; 2000US-00666870.
PR   14-JUN-2001; 2001US-00883119.
PR   24-SEP-2001; 2001US-0324715P.
XX
PA   (ELLI/) ELLINGTON A D.
PA   (HESS/) HESSELBERTH J.
PA   (THOM/) THOMPSON K.
PA   (ROBE/) ROBERTSON M P.
PA   (SOOT/) SOOTER L.
PA   (DAVI/) DAVIDSON E.
PA   (COXJ/) COX J C.
PA   (RIED/) RIEDEL T.
PA   (WILS/) WILSON C.
PA   (CLOA/) CLOAD S T.
PA   (KEEF/) KEEFE A D.
XX
PI   Ellington AD,  Hesselberth J,  Thompson K,  Robertson MP,  Sooter L;
PI   Davidson E,  Cox JC,  Riedel T,  Wilson C,  Cload ST,  Keefe AD;
XX
DR   WPI; 2004-560517/54.
XX
PT   Novel regulatable, catalytically active nucleic acid comprising effector
PT   domain, and catalyst domain which comprises randomized catalytic residues
PT   and is regulated by effector that interacts with effector domain.
XX
```

```
PS   Example 1; SEQ ID NO 38; 78pp; English.
XX
CC   The invention relates to a regulatable, catalytically active nucleic acid
CC   (RCANA) segment comprising an effector domain and a nucleic acid catalyst
CC   domain in which one or more critical catalytic residues of the nucleic
CC   acid catalyst have been randomised, where the kinetic parameters of the
CC   catalytic domain are regulated by an effector that interacts with the
CC   effector domain. Also included are a nucleic acid comprising a gene, a
CC   RCANA inserted within the gene (where the presence of an effector causes
CC   the nucleic acid to catalyse a reaction), isolating an RCANA (comprising
CC   a catalytic and an effector domain involving randomising at least one
CC   nucleotide in the catalytic domain of a catalytically active nucleic acid
CC   to create a nucleic acid pool, removing from the nucleic acid pool those
CC   nucleic acids that interact with the catalytic target of the catalytic
CC   domain, adding an effector molecule to the nucleic acids and isolating
CC   those nucleic acids that interact with the catalytic target of the
CC   catalytic domain), detection of a target using a RCANA, modifying a
CC   target using a RCANA (involving providing a RCANA capable of target-
CC   specific modification and modifying the target under conditions that
CC   cause a RCANA-specific activity), selecting an RCANA and detecting an
CC   RCANA (involving isolating an RCANA, creating a construct in which the
CC   nucleic acid is in position to regulate the expression of a reporter
CC   gene, introducing the construct into a host cell and measuring the
CC   catalytic activity of the nucleic acid upon exposure of the host cell to
CC   the effector. The RCANA is useful for regulating production of a product
CC   in a cell (by gene therapy) which involves inserting into a gene that
CC   produces the product or regulates the production of the product in the
CC   cell an RCANA which comprises a catalytic domain, that modifies a
CC   transcript to alter its coding potential, and a regulatory domain which
CC   recognises an effector that alters the function of the catalytic domain,
CC   contacting the regulatory domain with an effector thereby regulating
CC   production of the product. The concentration of the effector modulates
CC   the activity of the catalytic domain of the RCANA. The production of the
CC   product is fully inhibited or is increased compared to a normal control
CC   level, or is partially inhibited according to the concentration of the
CC   effector. The RCANA blocks or activates expression of the gene. The
CC   effector is the product, where it accesses feedback inhibitor of the
CC   gene. The product is produced in a metabolic pathway that is being
CC   regulated, and the effector or the product is an intermediate in a
CC   metabolic pathway. The effector is endogenous or exogenous to the cell.
CC   The effector is an end product of a biosynthetic process. The effector or
CC   the product is chosen from protein, enzyme, protein pharmaceutical,
CC   metabolite, drug, dye, vitamin, food additive, chemical additive,
CC   pesticide, insecticide, feed compound, and a waste product. The drug is
CC   chosen from antibiotics, anticancer drugs, antifungals, cholesterol-
CC   lowering drugs, and immunosuppressants. The RCANA is useful for
CC   regulating a biological pathway in a cell, for screening a population of
CC   cells for a cell that produces a bioproduct, for modulating expression of
CC   a nucleic acid, in gene therapy applications, and for facilitating
CC   industrial biosynthesis and bioremediation. The present sequence is an
CC   RCANA based on the bacteriophage T4 thymidylate synthase gene self-
CC   splicing intron.
XX
SQ   Sequence 82 BP; 24 A; 21 C; 16 G; 0 T; 21 U; 0 Other;

  Query Match            62.6%;  Score 82;  DB 1;  Length 82;
  Best Local Similarity  74.4%;  Pred. No. 1.8e-05;
  Matches   61;  Conservative   21;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         37 TAAACGGGGAACCTCTCTAGTAGACAATCCCGTGCTAAATTATACCAGCATCGTCTTGAT 96
              :|||||||||||||:|:|:|||:||||||:||||:|||:||::|:|||||||:||:|:::||:
Db          1 UAAACGGGGAACCUCUCUAGUAGACAAUCCCGUGCUAAAUUAUACCAGCAUCGUCUUGAU 60

Qy         97 GCCCTTGGCAGATAAATGCCTA 118
              ||||::||||||:|||:|||:|
Db         61 GCCCUUGGCAGAUAAAUGCCUA 82


RESULT 5
ADQ96997
ID   ADQ96997 standard; RNA; 82 BP.
XX
AC   ADQ96997;
XX
DT   23-SEP-2004  (first entry)
XX
DE   Theophylline-dependent group I intron RCANA Th1P6.
XX
KW   RCANA; catalytically active regulatable nucleic acid; ss; ribozyme;
KW   aptamer; effector domain; nucleic acid catalyst domain; gene therapy;
KW   industrial biosynthesis; bioremediation; bacteriophage T4;
KW   thymidylate synthase; self-splicing intron.
XX
OS   Enterobacteria phage T4.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_binding     4. .8
FT                    /*tag=  a
FT                    /bound_moiety= "Bases 33-29 of the present sequence"
FT   stem_loop        14. .24
FT                    /*tag=  b
FT   misc_binding     29. .33
FT                    /*tag=  c
FT                    /bound_moiety= "Bases 8-4 of the present sequence"
FT   misc_binding     34. .35
FT                    /*tag=  d
FT                    /bound_moiety= "Bases 78-79 of the present sequence"
FT   misc_binding     41
FT                    /*tag=  e
FT                    /bound_moiety= "Base 72 of the present sequence"
FT   misc_binding     45. .46
FT                    /*tag=  f
FT                    /bound_moiety= "Bases 68-67 of the present sequence"
FT   stem_loop        48. .62
FT                    /*tag=  g
FT   misc_binding     67. .68
FT                    /*tag=  h
FT                    /bound_moiety= "Bases 46-45 of the present sequence"
FT   misc_binding     72
FT                    /*tag=  i
FT                    /bound_moiety= "Base 41 of the present sequence"
FT   misc_binding     78. .79
FT                    /*tag=  j
FT                    /bound_moiety= "Bases 35-34 of the present sequence"
XX
PN   US2004126882-A1.
XX
PD   01-JUL-2004.
XX
PF   24-SEP-2002; 2002US-00254568.
XX
PR   15-JUN-2000; 2000US-0212097P.
PR   14-SEP-2000; 2000US-00661658.
PR   20-SEP-2000; 2000US-00666870.
PR   14-JUN-2001; 2001US-00883119.
PR   24-SEP-2001; 2001US-0324715P.
XX
PA   (ELLI/) ELLINGTON A D.
PA   (HESS/) HESSELBERTH J.
PA   (THOM/) THOMPSON K.
PA   (ROBE/) ROBERTSON M P.
PA   (SOOT/) SOOTER L.
PA   (DAVI/) DAVIDSON E.
PA   (COXJ/) COX J C.
PA   (RIED/) RIEDEL T.
PA   (WILS/) WILSON C.
PA   (CLOA/) CLOAD S T.
PA   (KEEF/) KEEFE A D.
XX
PI   Ellington AD,  Hesselberth J,  Thompson K,  Robertson MP,  Sooter L;
PI   Davidson E,  Cox JC,  Riedel T,  Wilson C,  Cload ST,  Keefe AD;
XX
DR   WPI; 2004-560517/54.
XX
PT   Novel regulatable, catalytically active nucleic acid comprising effector
```

```
PT   domain, and catalyst domain which comprises randomized catalytic residues
PT   and is regulated by effector that interacts with effector domain.
XX
PS   Example 5; SEQ ID NO 65; 78pp; English.
XX
CC   The invention relates to a regulatable, catalytically active nucleic acid
CC   (RCANA) segment comprising an effector domain and a nucleic acid catalyst
CC   domain in which one or more critical catalytic residues of the nucleic
CC   acid catalyst have been randomised, where the kinetic parameters of the
CC   catalytic domain are regulated by an effector that interacts with the
CC   effector domain. Also included are a nucleic acid comprising a gene, a
CC   RCANA inserted within the gene (where the presence of an effector causes
CC   the nucleic acid to catalyse a reaction), isolating an RCANA (comprising
CC   a catalytic and an effector domain involving randomising at least one
CC   nucleotide in the catalytic domain of a catalytically active nucleic acid
CC   to create a nucleic acid pool, removing from the nucleic acid pool those
CC   nucleic acids that interact with the catalytic target of the catalytic
CC   domain, adding an effector molecule to the nucleic acids and isolating
CC   those nucleic acids that interact with the catalytic target of the
CC   catalytic domain), detection of a target using a RCANA, modifying a
CC   target using a RCANA (involving providing a RCANA capable of target-
CC   specific modification and modifying the target under conditions that
CC   cause a RCANA-specific activity), selecting an RCANA and detecting an
CC   RCANA (involving isolating an RCANA, creating a construct in which the
CC   nucleic acid is in position to regulate the expression of a reporter
CC   gene, introducing the construct into a host cell and measuring the
CC   catalytic activity of the nucleic acid upon exposure of the host cell to
CC   the effector. The RCANA is useful for regulating production of a product
CC   in a cell (by gene therapy) which involves inserting into a gene that
CC   produces the product or regulates the production of the product in the
CC   cell an RCANA which comprises a catalytic domain, that modifies a
CC   transcript to alter its coding potential, and a regulatory domain which
CC   recognises an effector that alters the function of the catalytic domain,
CC   contacting the regulatory domain with an effector thereby regulating
CC   production of the product. The concentration of the effector modulates
CC   the activity of the catalytic domain of the RCANA. The production of the
CC   product is fully inhibited or is increased compared to a normal control
CC   level, or is partially inhibited according to the concentration of the
CC   effector. The RCANA blocks or activates expression of the gene. The
CC   effector is the product, where it accesses feedback inhibitor of the
CC   gene. The product is produced in a metabolic pathway that is being
CC   regulated, and the effector or the product is an intermediate in a
CC   metabolic pathway. The effector is endogenous or exogenous to the cell.
CC   The effector is an end product of a biosynthetic process. The effector or
CC   the product is chosen from protein, enzyme, protein pharmaceutical,
CC   metabolite, drug, dye, vitamin, food additive, chemical additive,
CC   pesticide, insecticide, feed compound, and a waste product. The drug is
CC   chosen from antibiotics, anticancer drugs, antifungals, cholesterol-
CC   lowering drugs, and immunosuppressants. The RCANA is useful for
CC   regulating a biological pathway in a cell, for screening a population of
CC   cells for a cell that produces a bioproduct, for modulating expression of
CC   a nucleic acid, in gene therapy applications, and for facilitating
CC   industrial biosynthesis and bioremediation. The present sequence is an
CC   RCANA based on the bacteriophage T4 thymidylate synthase gene self-
CC   splicing intron.
XX
SQ   Sequence 82 BP; 24 A; 21 C; 16 G; 0 T; 21 U; 0 Other;

  Query Match             62.6%;  Score 82;  DB 1;  Length 82;
  Best Local Similarity   74.4%;  Pred. No. 1.8e-05;
  Matches   61;  Conservative   21;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         37 TAAACGGGGAACCTCTCTAGTAGACAATCCCGTGCTAAATTATACCAGCATCGTCTTGAT 96
              :|||||||||||||:|:|:||:||||||:||||:||:|||::|:|||||||:||:|::||:
Db          1 UAAACGGGGAACCUCUCUAGUAGACAAUCCCGUGCUAAAUUAUACCAGCAUCGUCUUGAU 60

Qy         97 GCCCTTGGCAGATAAATGCCTA 118
              ||||::||||||:|||:|||:|
Db         61 GCCCUUGGCAGAUAAAUGCCUA 82


RESULT 6
ABN83053
ID   ABN83053 standard; RNA; 82 BP.
XX
AC   ABN83053;
XX
DT   16-AUG-2002  (first entry)
XX
DE   Group I P6 aptazyme pool.
XX
KW   Aptazyme; regulatable; aptamer; luciferase; cyclic AMP; ss;
KW   group I ribozyme; anti-theophylline; aptazyme pool.
XX
OS   Unidentified.
XX
FH   Key             Location/Qualifiers
FT   misc_binding    4. .9
FT                   /*tag=  a
FT                   /bound_moiety= "Bases 33-28"
FT   stem_loop       14. .24
FT                   /*tag=  b
FT   misc_binding    28. .33
FT                   /*tag=  a
FT                   /bound_moiety= "Bases 9-4"
FT   misc_binding    34. .35
FT                   /*tag=  c
FT                   /bound_moiety= "Bases 79-78"
FT   misc_feature    41
FT                   /*tag=  d
FT                   /note= "Base may be repeated 1-4 times"
FT   misc_binding    45. .46
FT                   /*tag=  e
FT                   /bound_moiety= "Bases 68-67"
FT   stem_loop       48. .62
FT                   /*tag=  f
FT   misc_binding    67. .68
FT                   /*tag=  g
FT                   /bound_moiety= "Bases 46-45"
FT   misc_feature    72
FT                   /*tag=  h
FT                   /bound_moiety= "Base may be repeated 1-4 times"
FT   misc_binding    78. .79
FT                   /*tag=  i
FT                   /bound_moiety= "Bases 35-34"
XX
PN   WO200196541-A2.
XX
PD   20-DEC-2001.
XX
PF   15-JUN-2001; 2001WO-US019119.
XX
PR   15-JUN-2000; 2000US-00661658.
XX
PA   (TEXA ) UNIV TEXAS.
XX
PI   Ellington AD,  Hesselberth J,  Marshall K,  Robertson M,  Sooter L;
PI   Davidson E,  Cox JC,  Reidel T;
XX
DR   WPI; 2002-090203/12.
XX
PT   Aptazyme construct for detecting the presence of ligands, comprises a
PT   regulatable Group I intron aptamer oligonucleotide with a regulatory
PT   domain, and modulates their kinetic parameters in response to an
PT   effector.
XX
PS   Example 2; Fig 3; 42pp; English.
XX
CC   The sequence represents a portion of the P6 region of the Group I
CC   ribozyme joined to the anti-theophylline aptamer by a short randomised
CC   region to generate a pool of aptazymes of the presents invention. The
CC   invention relates to a novel aptazyme construct comprising a regulatable
CC   Group I intron aptamer oligonucleotide sequence having an allosterically
CC   regulatable regulatory domain, where the kinetic parameters of the
CC   aptazyme on a target gene vary in response to the interaction of an
CC   allosteric effector molecule with the regulatory domain, and the intron
```

```
CC   splicing reaction occurs in vitro. The aptazyme is useful: (1) in assays
CC   to detect the presence of ligands or to detect activation of an aptazyme
CC   by an effector; (2) in the identification, isolation and enhancement of
CC   allosteric effectors and of the allosterically regulatable aptazymes with
CC   which they interact; (3) to activate or repress a reporter gene (e.g.
CC   luciferase) containing an engineered intron in response to an endogenous
CC   activator; and (4) to monitor intracellular levels of proteins or small
CC   molecules such as cyclic AMP
XX
SQ   Sequence 82 BP; 23 A; 21 C; 16 G; 0 T; 20 U; 2 Other;

  Query Match             61.1%;  Score 80;  DB 1;  Length 82;
  Best Local Similarity   73.2%;  Pred. No. 2.7e-05;
  Matches   60;  Conservative   20;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         37 TAAACGGGGAACCTCTCTAGTAGACAATCCCGTGCTAAATTATACCAGCATCGTCTTGAT 96
              :||||||||||||:|:|:||:||||||:||||:||:|||: |:|||||||:||:|::||:
Db          1 UAAACGGGGAACCUCUCUAGUAGACAAUCCCGUGCUAAAUNAUACCAGCAUCGUCUUGAU 60

Qy         97 GCCCTTGGCAGATAAATGCCTA 118
              ||||::||||| :|||:|||:|
Db         61 GCCCUUGGCAGNUAAAUGCCUA 82


RESULT 7
AAL43048
ID   AAL43048 standard; DNA; 94 BP.
XX
AC   AAL43048;
XX
DT   25-SEP-2002  (first entry)
XX
DE   Regulatable, catalytically active nucleic acid construction oligo #7.
XX
KW   Regulatable catalytically active nucleic acid; RCANA; ribozyme;
KW   gene therapy; ds.
XX
OS   Synthetic.
XX
PN   WO200196559-A2.
XX
PD   20-DEC-2001.
XX
PF   14-JUN-2001; 2001WO-US019302.
XX
PR   15-JUN-2000; 2000US-0212097P.
XX
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Ellington AD,  Hesselberth J,  Marshall K,  Robertson M,  Sooter L;
PI   Davidson E,  Cox JC,  Reidel T;
XX
DR   WPI; 2002-122216/16.
XX
PT   New regulatable, catalytically active nucleic acids (RCANA), useful in
PT   gene therapy (particularly for regulating gene expression), or in assays
PT   for detecting the presence of ligands or activation of an effector of
PT   RCANA.
XX
PS   Example 5; Page 68; 126pp; English.
XX
CC   The present invention relates to regulatable, catalytically active
CC   nucleic acids (RCANAs) which are regulated by polypeptides. These are
CC   useful for regulating gene expression, in assays for detecting the
CC   presence of ligands, for activation of an effector of RCANA, and in gene
CC   therapy. The present sequence is an oligonucleotide used in the
CC   construction of an RCANA
XX
SQ   Sequence 94 BP; 27 A; 23 C; 17 G; 27 T; 0 U; 0 Other;

  Query Match             58.0%;  Score 76;  DB 1;  Length 94;
  Best Local Similarity   100.0%;  Pred. No. 6.1e-05;
  Matches   76;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GCCTGAGTATAAGGTGACTTATACTTGTAATCTATCTAAACGGGGAACCTCTCTAGTAGA 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 GCCTGAGTATAAGGTGACTTATACTTGTAATCTATCTAAACGGGGAACCTCTCTAGTAGA 60

Qy         61 CAATCCCGTGCTAAAT 76
              ||||||||||||||||
Db         61 CAATCCCGTGCTAAAT 76


RESULT 8
ADA39564
ID   ADA39564 standard; DNA; 94 BP.
XX
AC   ADA39564;
XX
DT   20-NOV-2003  (first entry)
XX
DE   RCANA construction related oligonucleotide SEQ ID NO:20.
XX
KW   regulatable catalytically active nucleic acid; RCANA; catalytic domain;
KW   regulation; screening; gene therapy; biological pathway regulation;
KW   regulatory element; metabolic pathway; ribozyme; ss.
XX
OS   Synthetic.
XX
PN   WO2003027310-A2.
XX
PD   03-APR-2003.
XX
PF   24-SEP-2002; 2002WO-US030458.
XX
PR   24-SEP-2001; 2001US-0324715P.
XX
PA   (ARCH-) ARCHEMIX CORP.
XX
PI   Wilson C,  Cload ST,  Keefe AD;
XX
DR   WPI; 2003-354657/33.
XX
PT   Regulating production of a product in a cell, comprises inserting a
PT   regulatable catalytically active nucleic acid into a gene that produces
PT   the product or regulates the production of the product in the cell.
XX
PS   Example 5; Page 70; 128pp; English.
XX
CC   The present invention describes a method for regulating production of a
CC   product in a cell. The method comprises inserting a regulatable
CC   catalytically active nucleic acid (RCANA) into a gene that produces the
CC   product or regulates the production of the product in the cell, where the
CC   RCANA comprises a catalytic domain which modifies a transcript to alter
CC   its coding potential and a regulatory domain that recognises an effector
CC   that alters the function of the catalytic domain, and contacting the
CC   regulatory domain with an effector to regulate production of the product.
CC   Also described: (1) regulating a biological pathway in cell; and (2)
CC   screening a population of cells for a cell that produces a bioproduct.
CC   The methods are useful for regulating a biological pathway in cell, or
CC   regulating production of a product in a cell. The RCANAs are useful as
CC   regulatory elements to control the expression of genes in a metabolic
CC   pathway, or as regulated selectable markers to increase a selective
CC   pressure favouring or disfavouring production of a targeted bioproduct.
CC   The RCANAs are also useful for in vitro or in vivo sensing or detection,
CC   and in gene therapy. The present sequence represents an oligonucleotide
CC   used in the construction of an RCANA, which is used in an example from
CC   the present invention.
XX
SQ   Sequence 94 BP; 27 A; 23 C; 17 G; 27 T; 0 U; 0 Other;

  Query Match             58.0%;  Score 76;  DB 1;  Length 94;
  Best Local Similarity   100.0%;  Pred. No. 6.1e-05;
  Matches   76;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GCCTGAGTATAAGGTGACTTATACTTGTAATCTATCTAAACGGGGAACCTCTCTAGTAGA 60
```

```
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 GCCTGAGTATAAGGTGACTTATACTTGTAATCTATCTAAACGGGGAACCTCTCTAGTAGA 60

Qy         61 CAATCCCGTGCTAAAT 76
              ||||||||||||||||
Db         61 CAATCCCGTGCTAAAT 76
```

RESULT 9
ADQ96955
ID ADQ96955 standard; DNA; 94 BP.
XX
AC ADQ96955;
XX
DT 23-SEP-2004 (first entry)
XX
DE RCANA GPITH1P6 mutagenic oligonucleotide B11.
XX
KW RCANA; catalytically active regulatable nucleic acid; ss; ribozyme;
KW aptamer; effector domain; nucleic acid catalyst domain; gene therapy;
KW industrial biosynthesis; bioremediation; bacteriophage T4;
KW thymidylate synthase; self-splicing intron.
XX
OS Enterobacteria phage T4.
OS Synthetic.
XX
PN US2004126882-A1.
XX
PD 01-JUL-2004.
XX
PF 24-SEP-2002; 2002US-00254568.
XX
PR 15-JUN-2000; 2000US-0212097P.
PR 14-SEP-2000; 2000US-00661658.
PR 20-SEP-2000; 2000US-00666870.
PR 14-JUN-2001; 2001US-00883119.
PR 24-SEP-2001; 2001US-0324715P.
XX
PA (ELLI/) ELLINGTON A D.
PA (HESS/) HESSELBERTH J.
PA (THOM/) THOMPSON K.
PA (ROBE/) ROBERTSON M P.
PA (SOOT/) SOOTER L.
PA (DAVI/) DAVIDSON E.
PA (COXJ/) COX J C.
PA (RIED/) RIEDEL T.
PA (WILS/) WILSON C.
PA (CLOA/) CLOAD S T.
PA (KEEF/) KEEFE A D.
XX
PI Ellington AD, Hesselberth J, Thompson K, Robertson MP, Sooter L;
PI Davidson E, Cox JC, Riedel T, Wilson C, Cload ST, Keefe AD;
XX
DR WPI; 2004-560517/54.
XX
PT Novel regulatable, catalytically active nucleic acid comprising effector
PT domain, and catalyst domain which comprises randomized catalytic residues
PT and is regulated by effector that interacts with effector domain.
XX
PS Example 5; SEQ ID NO 20; 78pp; English.
XX
CC The invention relates to a regulatable, catalytically active nucleic acid
CC (RCANA) segment comprising an effector domain and a nucleic acid catalyst
CC domain in which one or more critical catalytic residues of the nucleic
CC acid catalyst have been randomised, where the kinetic parameters of the
CC catalytic domain are regulated by an effector that interacts with the
CC effector domain. Also included are a nucleic acid comprising a gene, a
CC RCANA inserted within the gene (where the presence of an effector causes
CC the nucleic acid to catalyse a reaction), isolating an RCANA (comprising
CC a catalytic and an effector domain involving randomising at least one
CC nucleotide in the catalytic domain of a catalytically active nucleic acid
CC to create a nucleic acid pool, removing from the nucleic acid pool those
CC nucleic acids that interact with the catalytic target of the catalytic
CC domain, adding an effector molecule to the nucleic acids and isolating
CC those nucleic acids that interact with the catalytic target of the
CC catalytic domain), detection of a target using a RCANA, modifying a
CC target using a RCANA (involving providing a RCANA capable of target-
CC specific modification and modifying the target under conditions that
CC cause a RCANA-specific activity), selecting an RCANA and detecting an
CC RCANA (involving isolating an RCANA, creating a construct in which the
CC nucleic acid is in position to regulate the expression of a reporter
CC gene, introducing the construct into a host cell and measuring the
CC catalytic activity of the nucleic acid upon exposure of the host cell to
CC the effector. The RCANA is useful for regulating production of a product
CC in a cell (by gene therapy) which involves inserting into a gene that
CC produces the product or regulates the production of the product in the
CC cell an RCANA which comprises a catalytic domain, that modifies a
CC transcript to alter its coding potential, and a regulatory domain which
CC recognises an effector that alters the function of the catalytic domain,
CC contacting the regulatory domain with an effector thereby regulating
CC production of the product. The concentration of the effector modulates
CC the activity of the catalytic domain of the RCANA. The production of the
CC product is fully inhibited or is increased compared to a normal control
CC level, or is partially inhibited according to the concentration of the
CC effector. The RCANA blocks or activates expression of the gene. The
CC effector is the product, where it accesses feedback inhibitor of the
CC gene. The product is produced in a metabolic pathway that is being
CC regulated, and the effector or the product is an intermediate in a
CC metabolic pathway. The effector is endogenous or exogenous to the cell.
CC The effector is an end product of a biosynthetic process. The effector or
CC the product is chosen from protein, enzyme, protein pharmaceutical,
CC metabolite, drug, dye, vitamin, food additive, chemical additive,
CC pesticide, insecticide, feed compound, and a waste product. The drug is
CC chosen from antibiotics, anticancer drugs, antifungals, cholesterol-
CC lowering drugs, and immunosuppressants. The RCANA is useful for
CC regulating a biological pathway in a cell, for screening a population of
CC cells for a cell that produces a bioproduct, for modulating expression of
CC a nucleic acid, in gene therapy applications, and for facilitating
CC industrial biosynthesis and bioremediation. The present sequence is an
CC oligonucleotide used to mutate the catalytic region of an RCANA based on
CC the bacteriophage T4 thymidylate synthase gene self-splicing intron.
XX
SQ Sequence 94 BP; 27 A; 23 C; 17 G; 27 T; 0 U; 0 Other;

```
  Query Match             58.0%;  Score 76;  DB 1;  Length 94;
  Best Local Similarity   100.0%;  Pred. No. 6.1e-05;
  Matches   76;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GCCTGAGTATAAGGTGACTTATACTTGTAATCTATCTAAACGGGGAACCTCTCTAGTAGA 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 GCCTGAGTATAAGGTGACTTATACTTGTAATCTATCTAAACGGGGAACCTCTCTAGTAGA 60

Qy         61 CAATCCCGTGCTAAAT 76
              ||||||||||||||||
Db         61 CAATCCCGTGCTAAAT 76
```

RESULT 10
AAL43089
ID AAL43089 standard; RNA; 45 BP.
XX
AC AAL43089;
XX
DT 25-SEP-2002 (first entry)
XX
DE Regulatable, catalytically active nucleic acid #21.
XX
KW Regulatable catalytically active nucleic acid; RCANA; ribozyme;
KW gene therapy; ss.
XX
OS Unidentified.
XX
FH Key Location/Qualifiers
FT misc_binding 4. .8
FT /*tag= a
FT /bound_moiety= "binds nucleotides 33-29 of itself"

```
FT   stem_loop       14. .24
FT                   /*tag= b
FT   misc_binding    29. .33
FT                   /*tag= c
FT                   /bound_moiety= "binds nucleotides 8-4 of itself"
FT   stem_loop       34. .42
FT                   /*tag= d
XX
PN   WO200196559-A2.
XX
PD   20-DEC-2001.
XX
PF   14-JUN-2001; 2001WO-US019302.
XX
PR   15-JUN-2000; 2000US-0212097P.
XX
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Ellington AD, Hesselberth J, Marshall K, Robertson M, Sooter L;
PI   Davidson E, Cox JC, Reidel T;
XX
DR   WPI; 2002-122216/16.
XX
PT   New regulatable, catalytically active nucleic acids (RCANA), useful in
PT   gene therapy (particularly for regulating gene expression), or in assays
PT   for detecting the presence of ligands or activation of an effector of
PT   RCANA.
XX
PS   Example 5; Fig 25B; 126pp; English.
XX
CC   The present invention relates to regulatable, catalytically active
CC   nucleic acids (RCANAs) which are regulated by polypeptides. These are
CC   useful for regulating gene expression, in assays for detecting the
CC   presence of ligands, for activation of an effector of RCANA, and in gene
CC   therapy. The present sequence is an RCANA described in the
CC   exemplification of the invention
XX
SQ   Sequence 45 BP; 14 A; 12 C; 9 G; 0 T; 10 U; 0 Other;

  Query Match             30.5%;  Score 40;  DB 1;  Length 45;
  Best Local Similarity   77.5%;  Pred. No. 0.18;
  Matches   31;  Conservative    9;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         37 TAAACGGGGAACCTCTCTAGTAGACAATCCCGTGCTAAAT 76
              :|||||||||||:|:|:||:||||||:||||:||:|||:
Db          1 UAAACGGGGAACCUCUCUAGUAGACAAUCCCGUGCUAAAU 40


RESULT 11
ADQ96996
ID   ADQ96996 standard; RNA; 45 BP.
XX
AC   ADQ96996;
XX
DT   23-SEP-2004  (first entry)
XX
DE   Theophylline-dependent group I intron RCANA B11.
XX
KW   RCANA; catalytically active regulatable nucleic acid; ss; ribozyme;
KW   aptamer; effector domain; nucleic acid catalyst domain; gene therapy;
KW   industrial biosynthesis; bioremediation; bacteriophage T4;
KW   thymidylate synthase; self-splicing intron.
XX
OS   Enterobacteria phage T4.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_binding    4. .8
FT                   /*tag= a
FT                   /bound_moiety= "Bases 33-29 of the present sequence"
FT   stem_loop       14. .24
FT                   /*tag= b
FT   misc_binding    29. .33
FT                   /*tag= c
FT                   /bound_moiety= "Bases 8-4 of the present sequence"
FT   stem_loop       34. .42
FT                   /*tag= d
XX
PN   US2004126882-A1.
XX
PD   01-JUL-2004.
XX
PF   24-SEP-2002; 2002US-00254568.
XX
PR   15-JUN-2000; 2000US-0212097P.
PR   14-SEP-2000; 2000US-00661658.
PR   20-SEP-2000; 2000US-00666870.
PR   14-JUN-2001; 2001US-00883119.
PR   24-SEP-2001; 2001US-0324715P.
XX
PA   (ELLI/) ELLINGTON A D.
PA   (HESS/) HESSELBERTH J.
PA   (THOM/) THOMPSON K.
PA   (ROBE/) ROBERTSON M P.
PA   (SOOT/) SOOTER L.
PA   (DAVI/) DAVIDSON E.
PA   (COXJ/) COX J C.
PA   (RIED/) RIEDEL T.
PA   (WILS/) WILSON C.
PA   (CLOA/) CLOAD S T.
PA   (KEEF/) KEEFE A D.
XX
PI   Ellington AD, Hesselberth J, Thompson K, Robertson MP, Sooter L;
PI   Davidson E, Cox JC, Riedel T, Wilson C, Cload ST, Keefe AD;
XX
DR   WPI; 2004-560517/54.
XX
PT   Novel regulatable, catalytically active nucleic acid comprising effector
PT   domain, and catalyst domain which comprises randomized catalytic residues
PT   and is regulated by effector that interacts with effector domain.
XX
PS   Example 5; SEQ ID NO 64; 78pp; English.
XX
CC   The invention relates to a regulatable, catalytically active nucleic acid
CC   (RCANA) segment comprising an effector domain and a nucleic acid catalyst
CC   domain in which one or more critical catalytic residues of the nucleic
CC   acid catalyst have been randomised, where the kinetic parameters of the
CC   catalytic domain are regulated by an effector that interacts with the
CC   effector domain. Also included are a nucleic acid comprising a gene, a
CC   RCANA inserted within the gene (where the presence of an effector causes
CC   the nucleic acid to catalyse a reaction), isolating an RCANA (comprising
CC   a catalytic and an effector domain involving randomising at least one
CC   nucleotide in the catalytic domain of a catalytically active nucleic acid
CC   to create a nucleic acid pool, removing from the nucleic acid pool those
CC   nucleic acids that interact with the catalytic target of the catalytic
CC   domain, adding an effector molecule to the nucleic acids and isolating
CC   those nucleic acids that interact with the catalytic target of the
CC   catalytic domain), detection of a target using a RCANA, modifying a
CC   target using a RCANA (involving providing a RCANA capable of target-
CC   specific modification and modifying the target under conditions that
CC   cause a RCANA-specific activity), selecting an RCANA and detecting an
CC   RCANA (involving isolating an RCANA, creating a construct in which the
CC   nucleic acid is in position to regulate the expression of a reporter
CC   gene, introducing the construct into a host cell and measuring the
CC   catalytic activity of the nucleic acid upon exposure of the host cell to
CC   the effector. The RCANA is useful for regulating production of a product
CC   in a cell (by gene therapy) which involves inserting into a gene that
CC   produces the product or regulates the production of the product in the
CC   cell an RCANA which comprises a catalytic domain, that modifies a
CC   transcript to alter its coding potential, and a regulatory domain which
CC   recognises an effector that alters the function of the catalytic domain,
CC   contacting the regulatory domain with an effector thereby regulating
CC   production of the product. The concentration of the effector modulates
CC   the activity of the catalytic domain of the RCANA. The production of the
CC   product is fully inhibited or is increased compared to a normal control
CC   level, or is partially inhibited according to the concentration of the
```

```
CC   effector. The RCANA blocks or activates expression of the gene. The
CC   effector is the product, where it accesses feedback inhibitor of the
CC   gene. The product is produced in a metabolic pathway that is being
CC   regulated, and the effector or the product is an intermediate in a
CC   metabolic pathway. The effector is endogenous or exogenous to the cell.
CC   The effector is an end product of a biosynthetic process. The effector or
CC   the product is chosen from protein, enzyme, protein pharmaceutical,
CC   metabolite, drug, dye, vitamin, food additive, chemical additive,
CC   pesticide, insecticide, feed compound, and a waste product. The drug is
CC   chosen from antibiotics, anticancer drugs, antifungals, cholesterol-
CC   lowering drugs, and immunosuppressants. The RCANA is useful for
CC   regulating a biological pathway in a cell, for screening a population of
CC   cells for a cell that produces a bioproduct, for modulating expression of
CC   a nucleic acid, in gene therapy applications, and for facilitating
CC   industrial biosynthesis and bioremediation. The present sequence is an
CC   RCANA based on the bacteriophage T4 thymidylate synthase gene self-
CC   splicing intron.
XX
SQ   Sequence 45 BP; 14 A; 12 C; 9 G; 0 T; 10 U; 0 Other;

  Query Match             30.5%;  Score 40;  DB 1;  Length 45;
  Best Local Similarity   77.5%;  Pred. No. 0.18;
  Matches   31;  Conservative    9;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         37 TAAACGGGGAACCTCTCTAGTAGACAATCCCGTGCTAAAT 76
              :|||||||||||||:|:|:||:||||||:||||:||:|||:
Db          1 UAAACGGGGAACCUCUCUAGUAGACAAUCCCGUGCUAAAU 40


RESULT 12
AAA98320
ID   AAA98320 standard; RNA; 40 BP.
XX
AC   AAA98320;
XX
DT   02-FEB-2001  (first entry)
XX
DE   RNA aptamer Th SEQ ID NO: 1.
XX
KW   RNA aptamer; splice reaction; detection; fungicide; herbicide; cancer;
KW   pesticide; insecticide; diagnosis; viral disease; Grave's disease;
KW   spinal muscular atrophy; beta-thalassemia; ds.
XX
OS   Unidentified.
XX
PN   DE19909156-A1.
XX
PD   07-SEP-2000.
XX
PF   02-MAR-1999;   99DE-01009156.
XX
PR   02-MAR-1999;   99DE-01009156.
XX
PA   (AVET ) AVENTIS RES & TECHNOLOGIES GMBH & CO KG.
XX
PI   Huels C,  Bauer B,  Simandi C,  Luehrmann R,  Achsel T,  Vornlocher H;
XX
DR   WPI; 2000-588345/56.
XX
PT   Novel test system for detecting a splice reaction used to identify
PT   substances effective as fungicides, herbicides, pesticides and
PT   insecticides or to diagnose a disease.
XX
PS   Disclosure; Page 10; 36pp; German.
XX
CC   This invention describes a novel test system for detecting a splice
CC   reaction comprising at least 1 optionally similar immobilized nucleic
CC   acid with at least 1 nucleic acid (I) capable of splicing, at least 1 gel
CC   free detection system, at least a composition containing a splice
CC   component, a suitable detection probe, and if necessary other means of
CC   help. The method is used to identify substances, which are effective as
CC   fungicides, herbicides, pesticides and/or insecticides. The method can be
CC   used to diagnose cancer, a viral disease, Grave's disease, spinal
CC   muscular atrophy, beta-thalassemia, cancer caused by c-erb oncogene,
CC   hepatitis C infection and/or herpes simplex virus infection
XX
SQ   Sequence 40 BP; 9 A; 11 C; 9 G; 0 T; 11 U; 0 Other;

  Query Match             24.3%;  Score 31.8;  DB 1;  Length 40;
  Best Local Similarity   68.6%;  Pred. No. 1.1;
  Matches   24;  Conservative    9;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
              || : |:|||||||:||:|::||:||||::|||||
Db          1 AAGUGAUACCAGCAUCGUCUUGAUGCCCUUGGCAG 35


RESULT 13
AAQ89182
ID   AAQ89182 standard; RNA; 42 BP.
XX
AC   AAQ89182;
XX
DT   25-MAR-2003  (revised)
DT   16-JAN-1996  (first entry)
XX
DE   Theophylline affinity RNA molecule, TCT8-4,8.
XX
KW   Nucleic acid; ligand; thrombin; elastase; theophylline; caffeine;
KW   pharmaceutical; diagnosis; vascular endothelial growth factor;
KW   gene therapy; RNA; DNA; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_feature    1. .5
FT                   /*tag=  a
FT                   /note= "base pair with bases at positions 36-40"
FT   misc_feature    9. .11
FT                   /*tag=  b
FT                   /note= "base pair with bases at positions 30-32"
FT   misc_feature    12. .17
FT                   /*tag=  c
FT                   /note= "base pair with bases at positions 21-26"
XX
PN   WO9507364-A1.
XX
PD   16-MAR-1995.
XX
PF   08-SEP-1994;   94WO-US010306.
XX
PR   08-SEP-1993;   93US-00117991.
PR   07-OCT-1993;   93US-00134028.
PR   22-FEB-1994;   94US-00199507.
PR   25-APR-1994;   94US-00233012.
PR   28-APR-1994;   94US-00234997.
XX
PA   (NEXA-) NEXAGEN INC.
XX
PI   Gold L,  Pieken W,  Tasset D,  Janjic N,  Kirschenheuter GP;
PI   Polisky B,  Jayasena S,  Biesecker G,  Smith D,  Jenison RD;
XX
DR   WPI; 1995-123436/16.
XX
PT   Identifying nucleic acid ligands for target molecules - by partitioning
PT   increased affinity nucleic acids from a candidate mixt. and amplifying.
XX
PS   Example 26; Pig 49; 251pp; English.
XX
CC   The sequences given in AAQ89181-88 represent nucleic acid ligands to
CC   theophylline. These ligands were identified using the method of the
CC   invention. The method comprises contacting a candidate mixture with the
CC   target molecule (i.e. theophylline) where the nucleic acids which have an
CC   increased affinity to the target relative to the candidate mixture can be
CC   partitioned from the remainder of the candidate mixture. The increased
CC   affinity nucleic acids are partitioned from the remainder of the
```

```
CC   candidate mixture and the isolated nucleic acids are amplified to yield a
CC   ligand-enriched mixture of nucleic acids, in which the nucleic acid
CC   ligands can be identified. The isolated ligands may be used as
CC   pharmaceuticals, diagnostic agents and in gene therapy. The ligands may
CC   be RNA or DNA molecules. (Updated on 25-MAR-2003 to correct PN field.)
XX
SQ   Sequence 42 BP; 10 A; 12 C; 9 G; 0 T; 11 U; 0 Other;

  Query Match             24.3%;  Score 31.8;  DB 1;  Length 42;
  Best Local Similarity   68.6%;  Pred. No. 1.1;
  Matches   24;  Conservative    9;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
              || : |:|||||||:||:|::||:||||::|||||
Db          1 AAGUGAUACCAGCAUCGUCUUGAUGCCCUUGGCAG 35


RESULT 14
AAX90663
ID   AAX90663 standard; RNA; 38 BP.
XX
AC   AAX90663;
XX
DT   07-OCT-1999  (first entry)
XX
DE   Short RNA aptamer to regulate translation of Epo protein.
XX
KW   RNA aptamer; inserted; Epo gene; pVETLMEpo vector; bind specifically;
KW   high affinity; theophylline; non toxic ligand; translational control;
KW   Epo protein expression; regulated; ligand treatment; ds.
XX
OS   Synthetic.
XX
PN   WO9936511-A2.
XX
PD   22-JUL-1999.
XX
PF   19-JAN-1999;   99WO-US001194.
XX
PR   16-JAN-1998;   98US-0071731P.
PR   26-MAY-1998;   98US-0086825P.
PR   04-JAN-1999;   99US-0114955P.
PR   15-JAN-1999;   99US-00231235.
XX
PA   (CHIR ) CHIRON CORP.
XX
PI   Johnston JC,  Sauter SL,  Hsu D,  Sheridan PL,  Hardy SF;
PI   Dubensky TW,  Yee J;
XX
DR   WPI; 1999-444391/37.
XX
PT   New feline immunodeficiency virus vectors containing heterologous DNA
PT   sequences for gene therapy in transformed hosts.
XX
PS   Example 21A; Page 137; 170pp; English.
XX
CC   The present sequence is that of a short RNA aptamer which is inserted
CC   into the 5' untranslated region of the Epo gene in the pVETLMEpo vector.
CC   This aptamer is designed to bind specifically and with high affinity to
CC   theophylline, a soluble, cell permeable, non toxic ligand, and will
CC   result in the translational control of Epo protein expression being
CC   specifically induced and regulated following ligand treatment and binding
XX
SQ   Sequence 38 BP; 8 A; 11 C; 9 G; 0 T; 10 U; 0 Other;

  Query Match             23.5%;  Score 30.8;  DB 1;  Length 38;
  Best Local Similarity   67.6%;  Pred. No. 1.4;
  Matches   23;  Conservative    9;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         74 AATTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
              | : |:|||||||:||:|::||:||||::|||||
Db          1 AGUGAUACCAGCAUCGUCUUGAUGCCCUUGGCAG 34


RESULT 15
AAQ89171
ID   AAQ89171 standard; RNA; 38 BP.
XX
AC   AAQ89171;
XX
DT   25-MAR-2003  (revised)
DT   16-JAN-1996  (first entry)
XX
DE   Theophylline affinity mini-RNA molecule, mTCT8-4.
XX
KW   Nucleic acid; ligand; thrombin; elastase; theophylline; caffeine;
KW   pharmaceutical; diagnosis; vascular endothelial growth factor;
KW   gene therapy; RNA; DNA; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_feature    1. .4
FT                   /*tag=  a
FT                   /note= "bases pair with bases at positions 35-38"
FT   misc_feature    8. .10
FT                   /*tag=  b
FT                   /note= "bases pair with bases at positions 29-31"
FT   misc_feature    11. .16
FT                   /*tag=  c
FT                   /note= "bases pair with bases at positions 20-25"
XX
PN   WO9507364-A1.
XX
PD   16-MAR-1995.
XX
PF   08-SEP-1994;   94WO-US010306.
XX
PR   08-SEP-1993;   93US-00117991.
PR   07-OCT-1993;   93US-00134028.
PR   22-FEB-1994;   94US-00199507.
PR   25-APR-1994;   94US-00233012.
PR   28-APR-1994;   94US-00234997.
XX
PA   (NEXA-) NEXAGEN INC.
XX
PI   Gold L,  Pieken W,  Tasset D,  Janjic N,  Kirschenheuter GP;
PI   Polisky B,  Jayasena S,  Biesecker G,  Smith D,  Jenison RD;
XX
DR   WPI; 1995-123436/16.
XX
PT   Identifying nucleic acid ligands for target molecules - by partitioning
PT   increased affinity nucleic acids from a candidate mixt. and amplifying.
XX
PS   Example 26; Fig 52; 251pp; English.
XX
CC   This sequence respresents a nucleic acid ligand to theophylline. This
CC   ligand was construct from the conserved domains of larger theophylline
CC   ligands and a limited flanking sequence. These ligands were identified
CC   using the method of the invention. The method comprises contacting a
CC   candidate mixture with the target molecule (i.e. theophylline) where the
CC   nucleic acids which have an increased affinity to the target relative to
CC   the candidate mixture can be partitioned from the remainder of the
CC   candidate mixture. The increased affinity nucleic acids are partitioned
CC   from the remainder of the candidate mixture and the isolated nucleic
CC   acids are amplified to yield a ligand-enriched mixture of nucleic acids,
CC   in which the nucleic acid ligands can be identified. The isolated ligands
CC   may be used as pharmaceuticals, diagnostic agents and in gene therapy.
CC   The ligands may be RNA or DNA molecules. (Updated on 25-MAR-2003 to
CC   correct PN field.)
XX
SQ   Sequence 38 BP; 7 A; 12 C; 10 G; 0 T; 9 U; 0 Other;

  Query Match             23.2%;  Score 30.4;  DB 1;  Length 38;
  Best Local Similarity   68.8%;  Pred. No. 1.5;
  Matches   22;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;
```

```
Qy          76 TTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
               : |:|||||||:||:|::||:||||::|||||
Db           3 UGAUACCAGCAUCGUCUUGAUGCCCUUGGCAG 34


RESULT 16
AAQ89120
ID   AAQ89120 standard; RNA; 40 BP.
XX
AC   AAQ89120;
XX
DT   25-MAR-2003  (revised)
DT   14-NOV-1995  (first entry)
XX
DE   Theophylline affinity RNA molecule, TCT8-4, 8.
XX
KW   Nucleic acid; ligand; thrombin; elastase; theophylline; caffeine;
KW   pharmaceutical; diagnosis; vascular endothelial growth factor;
KW   gene therapy; RNA; DNA; ss.
XX
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_RNA        4. .9
FT                   /*tag=  a
FT                   /note= "Conserved region"
FT   repeat_region   10. .16
FT                   /*tag=  b
FT                   /rpt_type= INVERTED
FT   repeat_region   19. .24
FT                   /*tag=  c
FT                   /rpt_type= INVERTED
FT   misc_RNA        25. .33
FT                   /*tag=  d
FT                   /note= "Conserved region"
XX
PN   WO9507364-A1.
XX
PD   16-MAR-1995.
XX
PF   08-SEP-1994;   94WO-US010306.
XX
PR   08-SEP-1993;   93US-00117991.
PR   07-OCT-1993;   93US-00134028.
PR   22-FEB-1994;   94US-00199507.
PR   25-APR-1994;   94US-00233012.
PR   28-APR-1994;   94US-00234997.
XX
PA   (NEXA-) NEXAGEN INC.
XX
PI   Gold L,  Pieken W,  Tasset D,  Janjic N,  Kirschenheuter GP;
PI   Polisky B,  Jayasena S,  Biesecker G,  Smith D,  Jenison RD;
XX
DR   WPI; 1995-123436/16.
XX
PT   Identifying nucleic acid ligands for target molecules - by partitioning
PT   increased affinity nucleic acids from a candidate mixt. and amplifying.
XX
PS   Claim 62; Fig 48; 251pp; English.
XX
CC   The sequences given in AAQ89117-29 represent nucleic acid ligands to
CC   theophylline. These ligands were identified using the method of the
CC   invention. The method comprises contacting a candidate mixture with the
CC   target molecule (i.e. theophylline) where the nucleic acids which have an
CC   increased affinity to the target relative to the candidate mixture can be
CC   partitioned from the remainder of the candidate mixture. The increased
CC   affinity nucleic acids are partitioned from the remainder of the
CC   candidate mixture and the isolated nucleic acids are amplified to yield a
CC   ligand-enriched mixture of nucleic acids, in which the nucleic acid
CC   ligands can be identified. The isolated ligands may be used as
CC   pharmaceuticals, diagnostic agents and in gene therapy. The ligands may
CC   be RNA or DNA molecules. (Updated on 25-MAR-2003 to correct PN field.)
XX
SQ   Sequence 40 BP; 8 A; 12 C; 9 G; 0 T; 11 U; 0 Other;

  Query Match            23.2%;  Score 30.4;  DB 1;  Length 40;
  Best Local Similarity  68.8%;  Pred. No. 1.5;
  Matches   22;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          76 TTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
               : |:|||||||:||:|::||:||||::|||||
Db           2 UGAUACCAGCAUCGUCUUGAUGCCCUUGGCAG 33


RESULT 17
AAL43046
ID   AAL43046 standard; DNA; 24 BP.
XX
AC   AAL43046;
XX
DT   25-SEP-2002  (first entry)
XX
DE   Regulatable, catalytically active nucleic acid construction primer #6.
XX
KW   Regulatable catalytically active nucleic acid; RCANA; ribozyme;
KW   gene therapy; PCR; primer; ss.
XX
OS   Synthetic.
XX
PN   WO200196559-A2.
XX
PD   20-DEC-2001.
XX
PF   14-JUN-2001; 2001WO-US019302.
XX
PR   15-JUN-2000; 2000US-0212097P.
XX
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Ellington AD,  Hesselberth J,  Marshall K,  Robertson M,  Sooter L;
PI   Davidson E,  Cox JC,  Reidel T;
XX
DR   WPI; 2002-122216/16.
XX
PT   New regulatable, catalytically active nucleic acids (RCANA), useful in
PT   gene therapy (particularly for regulating gene expression), or in assays
PT   for detecting the presence of ligands or activation of an effector of
PT   RCANA.
XX
PS   Example 5; Page 67; 126pp; English.
XX
CC   The present invention relates to regulatable, catalytically active
CC   nucleic acids (RCANAs) which are regulated by polypeptides. These are
CC   useful for regulating gene expression, in assays for detecting the
CC   presence of ligands, for activation of an effector of RCANA, and in gene
CC   therapy. The present sequence is a PCR primer used in the construction of
CC   an RCANA
XX
SQ   Sequence 24 BP; 9 A; 4 C; 2 G; 9 T; 0 U; 0 Other;

  Query Match            17.1%;  Score 22.4;  DB 1;  Length 24;
  Best Local Similarity  95.8%;  Pred. No. 10;
  Matches   23;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          19 TTATACTTGTAATCTATCTAAACG 42
               ||||||| ||||||||||||||||
Db           1 TTATACTAGTAATCTATCTAAACG 24


RESULT 18
ADA39562
ID   ADA39562 standard; DNA; 24 BP.
XX
AC   ADA39562;
XX
```

DT 20-NOV-2003 (first entry)
XX
DE RCANA construction related oligonucleotide SEQ ID NO:18.
XX
KW regulatable catalytically active nucleic acid; RCANA; catalytic domain;
KW regulation; screening; gene therapy; biological pathway regulation;
KW regulatory element; metabolic pathway; ribozyme; ss.
XX
OS Synthetic.
XX
PN WO2003027310-A2.
XX
PD 03-APR-2003.
XX
PF 24-SEP-2002; 2002WO-US030458.
XX
PR 24-SEP-2001; 2001US-0324715P.
XX
PA (ARCH-) ARCHEMIX CORP.
XX
PI Wilson C, Cload ST, Keefe AD;
XX
DR WPI; 2003-354657/33.
XX
PT Regulating production of a product in a cell, comprises inserting a
PT regulatable catalytically active nucleic acid into a gene that produces
PT the product or regulates the production of the product in the cell.
XX
PS Example 5; Page 69; 128pp; English.
XX
CC The present invention describes a method for regulating production of a
CC product in a cell. The method comprises inserting a regulatable
CC catalytically active nucleic acid (RCANA) into a gene that produces the
CC product or regulates the production of the product in the cell, where the
CC RCANA comprises a catalytic domain which modifies a transcript to alter
CC its coding potential and a regulatory domain that recognises an effector
CC that alters the function of the catalytic domain, and contacting the
CC regulatory domain with an effector to regulate production of the product.
CC Also described: (1) regulating a biological pathway in cell; and (2)
CC screening a population of cells for a cell that produces a bioproduct.
CC The methods are useful for regulating a biological pathway in cell, or
CC regulating production of a product in a cell. The RCANAs are useful as
CC regulatory elements to control the expression of genes in a metabolic
CC pathway, or as regulated selectable markers to increase a selective
CC pressure favouring or disfavouring production of a targeted bioproduct.
CC The RCANAs are also useful for in vitro or in vivo sensing or detection,
CC and in gene therapy. The present sequence represents an oligonucleotide
CC used in the construction of an RCANA, which is used in an example from
CC the present invention.
XX
SQ Sequence 24 BP; 9 A; 4 C; 2 G; 9 T; 0 U; 0 Other;

Query Match 17.1%; Score 22.4; DB 1; Length 24;
Best Local Similarity 95.8%; Pred. No. 10;
Matches 23; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 19 TTATACTTGTAATCTATCTAAACG 42
||||||| ||||||||||||||||
Db 1 TTATACTAGTAATCTATCTAAACG 24

RESULT 19
ADQ96953
ID ADQ96953 standard; DNA; 24 BP.
XX
AC ADQ96953;
XX
DT 23-SEP-2004 (first entry)
XX
DE RCANA GPITH1P6 PCR primer #3.
XX
KW RCANA; catalytically active regulatable nucleic acid; ss; ribozyme;
KW aptamer; effector domain; nucleic acid catalyst domain; gene therapy;
KW industrial biosynthesis; bioremediation; PCR; primer.
XX
OS Enterobacteria phage T4.
OS Synthetic.
XX
PN US2004126882-A1.
XX
PD 01-JUL-2004.
XX
PF 24-SEP-2002; 2002US-00254568.
XX
PR 15-JUN-2000; 2000US-0212097P.
PR 14-SEP-2000; 2000US-00661658.
PR 20-SEP-2000; 2000US-00666870.
PR 14-JUN-2001; 2001US-00883119.
PR 24-SEP-2001; 2001US-0324715P.
XX
PA (ELLI/) ELLINGTON A D.
PA (HESS/) HESSELBERTH J.
PA (THOM/) THOMPSON K.
PA (ROBE/) ROBERTSON M P.
PA (SOOT/) SOOTER L.
PA (DAVI/) DAVIDSON E.
PA (COXJ/) COX J C.
PA (RIED/) RIEDEL T.
PA (WILS/) WILSON C.
PA (CLOA/) CLOAD S T.
PA (KEEF/) KEEFE A D.
XX
PI Ellington AD, Hesselberth J, Thompson K, Robertson MP, Sooter L;
PI Davidson E, Cox JC, Riedel T, Wilson C, Cload ST, Keefe AD;
XX
DR WPI; 2004-560517/54.
XX
PT Novel regulatable, catalytically active nucleic acid comprising effector
PT domain, and catalyst domain which comprises randomized catalytic residues
PT and is regulated by effector that interacts with effector domain.
XX
PS Example 5; SEQ ID NO 18; 78pp; English.
XX
CC The invention relates to a regulatable, catalytically active nucleic acid
CC (RCANA) segment comprising an effector domain and a nucleic acid catalyst
CC domain in which one or more critical catalytic residues of the nucleic
CC acid catalyst have been randomised, where the kinetic parameters of the
CC catalytic domain are regulated by an effector that interacts with the
CC effector domain. Also included are a nucleic acid comprising a gene, a
CC RCANA inserted within the gene (where the presence of an effector causes
CC the nucleic acid to catalyse a reaction), isolating an RCANA (comprising
CC a catalytic and an effector domain involving randomising at least one
CC nucleotide in the catalytic domain of a catalytically active nucleic acid
CC to create a nucleic acid pool, removing from the nucleic acid pool those
CC nucleic acids that interact with the catalytic target of the catalytic
CC domain, adding an effector molecule to the nucleic acids and isolating
CC those nucleic acids that interact with the catalytic target of the
CC catalytic domain), detection of a target using a RCANA, modifying a
CC target using a RCANA (involving providing a RCANA capable of target-
CC specific modification and modifying the target under conditions that
CC cause a RCANA-specific activity), selecting an RCANA and detecting an
CC RCANA (involving isolating an RCANA, creating a construct in which the
CC nucleic acid is in position to regulate the expression of a reporter
CC gene, introducing the construct into a host cell and measuring the
CC catalytic activity of the nucleic acid upon exposure of the host cell to
CC the effector. The RCANA is useful for regulating production of a product
CC in a cell (by gene therapy) which involves inserting into a gene that
CC produces the product or regulates the production of the product in the
CC cell an RCANA which comprises a catalytic domain, that modifies a
CC transcript to alter its coding potential, and a regulatory domain which
CC recognises an effector that alters the function of the catalytic domain,
CC contacting the regulatory domain with an effector thereby regulating
CC production of the product. The concentration of the effector modulates
CC the activity of the catalytic domain of the RCANA. The production of the
CC product is fully inhibited or is increased compared to a normal control
CC level, or is partially inhibited according to the concentration of the

```
CC   effector. The RCANA blocks or activates expression of the gene. The
CC   effector is the product, where it accesses feedback inhibitor of the
CC   gene. The product is produced in a metabolic pathway that is being
CC   regulated, and the effector or the product is an intermediate in a
CC   metabolic pathway. The effector is endogenous or exogenous to the cell.
CC   The effector is an end product of a biosynthetic process. The effector or
CC   the product is chosen from protein, enzyme, protein pharmaceutical,
CC   metabolite, drug, dye, vitamin, food additive, chemical additive,
CC   pesticide, insecticide, feed compound, and a waste product. The drug is
CC   chosen from antibiotics, anticancer drugs, antifungals, cholesterol-
CC   lowering drugs, and immunosuppressants. The RCANA is useful for
CC   regulating a biological pathway in a cell, for screening a population of
CC   cells for a cell that produces a bioproduct, for modulating expression of
CC   a nucleic acid, in gene therapy applications, and for facilitating
CC   industrial biosynthesis and bioremediation. The present sequence is a PCR
CC   primer used in the construction of an RCANA.
XX
SQ   Sequence 24 BP; 9 A; 4 C; 2 G; 9 T; 0 U; 0 Other;

  Query Match             17.1%;  Score 22.4;  DB 1;  Length 24;
  Best Local Similarity   95.8%;  Pred. No. 10;
  Matches   23;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         19 TTATACTTGTAATCTATCTAAACG 42
              ||||||| ||||||||||||||||
Db          1 TTATACTAGTAATCTATCTAAACG 24


RESULT 20
ADQ96938
ID   ADQ96938 standard; DNA; 21 BP.
XX
AC   ADQ96938;
XX
DT   23-SEP-2004  (first entry)
XX
DE   RCANA GPITH1P6 PCR primer #1.
XX
KW   RCANA; catalytically active regulatable nucleic acid; ss; ribozyme;
KW   aptamer; effector domain; nucleic acid catalyst domain; gene therapy;
KW   industrial biosynthesis; bioremediation; PCR; primer.
XX
OS   Enterobacteria phage T4.
OS   Synthetic.
XX
PN   US2004126882-A1.
XX
PD   01-JUL-2004.
XX
PF   24-SEP-2002; 2002US-00254568.
XX
PR   15-JUN-2000; 2000US-0212097P.
PR   14-SEP-2000; 2000US-00661658.
PR   20-SEP-2000; 2000US-00666870.
PR   14-JUN-2001; 2001US-00883119.
PR   24-SEP-2001; 2001US-0324715P.
XX
PA   (ELLI/) ELLINGTON A D.
PA   (HESS/) HESSELBERTH J.
PA   (THOM/) THOMPSON K.
PA   (ROBE/) ROBERTSON M P.
PA   (SOOT/) SOOTER L.
PA   (DAVI/) DAVIDSON E.
PA   (COXJ/) COX J C.
PA   (RIED/) RIEDEL T.
PA   (WILS/) WILSON C.
PA   (CLOA/) CLOAD S T.
PA   (KEEF/) KEEFE A D.
XX
PI   Ellington AD,  Hesselberth J,  Thompson K,  Robertson MP,  Sooter L;
PI   Davidson E,  Cox JC,  Riedel T,  Wilson C,  Cload ST,  Keefe AD;
XX
DR   WPI; 2004-560517/54.
XX
PT   Novel regulatable, catalytically active nucleic acid comprising effector
PT   domain, and catalyst domain which comprises randomized catalytic residues
PT   and is regulated by effector that interacts with effector domain.
XX
PS   Example 1; SEQ ID NO 3; 78pp; English.
XX
CC   The invention relates to a regulatable, catalytically active nucleic acid
CC   (RCANA) segment comprising an effector domain and a nucleic acid catalyst
CC   domain in which one or more critical catalytic residues of the nucleic
CC   acid catalyst have been randomised, where the kinetic parameters of the
CC   catalytic domain are regulated by an effector that interacts with the
CC   effector domain. Also included are a nucleic acid comprising a gene, a
CC   RCANA inserted within the gene (where the presence of an effector causes
CC   the nucleic acid to catalyse a reaction), isolating an RCANA (comprising
CC   a catalytic and an effector domain involving randomising at least one
CC   nucleotide in the catalytic domain of a catalytically active nucleic acid
CC   to create a nucleic acid pool, removing from the nucleic acid pool those
CC   nucleic acids that interact with the catalytic target of the catalytic
CC   domain, adding an effector molecule to the nucleic acids and isolating
CC   those nucleic acids that interact with the catalytic target of the
CC   catalytic domain), detection of a target using a RCANA, modifying a
CC   target using a RCANA (involving providing a RCANA capable of target-
CC   specific modification and modifying the target under conditions that
CC   cause a RCANA-specific activity), selecting an RCANA and detecting an
CC   RCANA (involving isolating an RCANA, creating a construct in which the
CC   nucleic acid is in position to regulate the expression of a reporter
CC   gene, introducing the construct into a host cell and measuring the
CC   catalytic activity of the nucleic acid upon exposure of the host cell to
CC   the effector. The RCANA is useful for regulating production of a product
CC   in a cell (by gene therapy) which involves inserting into a gene that
CC   produces the product or regulates the production of the product in the
CC   cell an RCANA which comprises a catalytic domain, that modifies a
CC   transcript to alter its coding potential, and a regulatory domain which
CC   recognises an effector that alters the function of the catalytic domain,
CC   contacting the regulatory domain with an effector thereby regulating
CC   production of the product. The concentration of the effector modulates
CC   the activity of the catalytic domain of the RCANA. The production of the
CC   product is fully inhibited or is increased compared to a normal control
CC   level, or is partially inhibited according to the concentration of the
CC   effector. The RCANA blocks or activates expression of the gene. The
CC   effector is the product, where it accesses feedback inhibitor of the
CC   gene. The product is produced in a metabolic pathway that is being
CC   regulated, and the effector or the product is an intermediate in a
CC   metabolic pathway. The effector is endogenous or exogenous to the cell.
CC   The effector is an end product of a biosynthetic process. The effector or
CC   the product is chosen from protein, enzyme, protein pharmaceutical,
CC   metabolite, drug, dye, vitamin, food additive, chemical additive,
CC   pesticide, insecticide, feed compound, and a waste product. The drug is
CC   chosen from antibiotics, anticancer drugs, antifungals, cholesterol-
CC   lowering drugs, and immunosuppressants. The RCANA is useful for
CC   regulating a biological pathway in a cell, for screening a population of
CC   cells for a cell that produces a bioproduct, for modulating expression of
CC   a nucleic acid, in gene therapy applications, and for facilitating
CC   industrial biosynthesis and bioremediation. The present sequence is a PCR
CC   primer used in the construction of an RCANA.
XX
SQ   Sequence 21 BP; 5 A; 2 C; 8 G; 6 T; 0 U; 0 Other;

  Query Match             12.2%;  Score 16;  DB 1;  Length 21;
  Best Local Similarity   100.0%;  Pred. No. 39;
  Matches   16;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 GCCTGAGTATAAGGTG 16
              ||||||||||||||||
Db          6 GCCTGAGTATAAGGTG 21


RESULT 21
ABQ84377/c
ID   ABQ84377 standard; DNA; 20 BP.
XX
AC   ABQ84377;
```

```
XX
DT   20-FEB-2003  (first entry)
XX
DE   DPP10 PCR primer #8.
XX
KW   DPP10; dipeptidyl peptidase; prolyloligopeptidase; enzyme; asthma;
KW   antiinflammatory; antiasthmatic; antipsoriatic; antiarthritic;
KW   antirheumatic; vaccine; gene therapy; inflammatory disease;
KW   inflammatory bowel disease; atopy; rheumatoid arthritis; psoriasis;
KW   chromosome 2q14; PCR primer; ss.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO200286113-A2.
XX
PD   31-OCT-2002.
XX
PF   24-APR-2002; 2002WO-GB001887.
XX
PR   24-APR-2001; 2001GB-00010044.
PR   24-APR-2001; 2001GB-00010046.
PR   12-OCT-2001; 2001GB-00024575.
PR   12-OCT-2001; 2001GB-00024594.
XX
PA   (ISIS-) ISIS INNOVATIONS LTD.
XX
PI   Cookson WOCM,  Moffat MF,  Allen M,  Lench N;
XX
DR   WPI; 2003-093132/08.
XX
PT   New nucleic acid sequence comprising DPP10 mRNA, useful for the
PT   manufacture of a medicament for regulating DPP10 protein expression or
PT   for preventing or treating inflammatory disease e.g., inflammatory bowel
PT   disease.
XX
PS   Claim 43; Page 313; 321pp; English.
XX
CC   The present invention describes a new isolated nucleic acid sequence (I)
CC   comprising a DPP10 mRNA sequence. DPP10 is a dipeptidyl peptidase (also
CC   known as prolyloligopeptidase). (I) has antiinflammatory, antiasthmatic,
CC   antipsoriatic, antiarthritic and antirheumatic activities, and can be
CC   used in vaccines and gene therapy. A composition comprising (I) can be
CC   used for the manufacture of a medicament for regulating DPP10 expression
CC   or for preventing or treating inflammatory disease e.g., inflammatory
CC   bowel disease, asthma, atopy, rheumatoid arthritis or psoriasis. (I) can
CC   also be used in an assay for detecting or measuring DPP10 in a sample. A
CC   host cell comprising (I) can be used for producing recombinant DPP10 gene
CC   products, or in drug screening systems to identify agents for diagnosis
CC   or treatment of individuals having or susceptible to inflammatory
CC   disease. Human DPP10 is located on chromosome 2, more specifically
CC   chromosome 2q14. ABQ84254 to ABQ84612 and ABP55569 to ABP55629 represent
CC   sequences used in the exemplification of the present invention
XX
SQ   Sequence 20 BP; 4 A; 5 C; 3 G; 8 T; 0 U; 0 Other;

  Query Match             12.1%;  Score 15.8;  DB 1;  Length 20;
  Best Local Similarity   89.5%;  Pred. No. 42;
  Matches   17;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          3 CTGAGTATAAGGTGACTTA 21
              ||||| |||||||||| ||
Db         19 CTGAGAATAAGGTGACCTA 1


RESULT 22
ABQ77191/c
ID   ABQ77191 standard; DNA; 20 BP.
XX
AC   ABQ77191;
XX
DT   24-APR-2003  (first entry)
XX
DE   Human ABCC12 exon 15/intron 15 boundary (short isoform).
XX
KW   Adenosine triphosphate (ATP)-binding cassette transporter subfamily C12;
KW   cystic fibrosis transmembrane conductance regulator; human; CFTR/MRP;
KW   multidrug resistance-like subgroup; somatic gene therapy; ABCC12;
KW   paroxysmal kinesigenic choreoathetosis; cysteinyl leukotriene;
KW   anionic drug; methotrexate; neutral drug; glutathione; glucuronate;
KW   sulphate conjugated drug; ds.
XX
OS   Homo sapiens.
XX
PN   WO200285943-A2.
XX
PD   31-OCT-2002.
XX
PF   05-MAR-2002; 2002WO-EP003320.
XX
PR   05-MAR-2001; 2001US-0272759P.
XX
PA   (AVET ) AVENTIS PHARMA SA.
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Rosier-Montus M,  Prades C,  Arnould-Reguigne I,  Denefle P,  Dean M;
PI   Allikmets R;
XX
DR   WPI; 2003-093101/08.
XX
PT   New ATP-binding cassette transporter gene subfamily C12, ABCC12
PT   polypeptide, useful for preventing or treating paroxysmal kinesigenic
PT   choreoathetosis.
XX
PS   Disclosure; Page 44; 122pp; English.
XX
CC   This invention describes a novel human ABCC12 (adenosine triphosphate
CC   (ATP)-binding cassette transporter gene subfamily C12, i.e. cystic
CC   fibrosis transmembrane conductance regulator/multidrug resistance-like
CC   subgroup (CFTR/MRP) family) polypeptide and its encoding polynucleotides
CC   The polypeptide is useful for screening agonists and antagonist of the
CC   ABCC12 polypeptide. The products of the invention are useful for
CC   screening an active ingredient for preventing and treating paroxysmal
CC   kinesigenic choreoathetosis or pathologies linked to dysfunction of
CC   transport of organic anion transporters such as cysteinyl leukotriene,
CC   anionic drugs, such as methotrexate, neutral drugs conjugated to acidic
CC   ligands, such as glutathione, glucuronate or sulphate conjugated drugs
CC   and can be used for somatic gene therapy. This sequence represents a
CC   region corresponding to an exon/intron boundary from the gene encoding a
CC   human ABCC12 isoform described in the disclosure of the invention
XX
SQ   Sequence 20 BP; 6 A; 2 C; 7 G; 5 T; 0 U; 0 Other;

  Query Match             11.8%;  Score 15.4;  DB 1;  Length 20;
  Best Local Similarity   94.1%;  Pred. No. 45;
  Matches   16;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         75 ATTATACCAGCATCGTC 91
              ||||||||||||||| ||
Db         17 ATTATACCAGCATCTTC 1


RESULT 23
AAV01286
ID   AAV01286 standard; DNA; 20 BP.
XX
AC   AAV01286;
XX
DT   23-MAR-1998  (first entry)
XX
DE   Skeletal muscle sodium channel PCR primer for universal mammalian STS.
XX
KW   PCR primer; polymerase chain reaction; amplification; UM-STS;
KW   universal mammalian sequence tagged site; genomic map; clone; ss.
XX
OS   Synthetic.
```

XX
PN WO9731012-A1.
XX
PD 28-AUG-1997.
XX
PF 18-FEB-1997; 97WO-US002403.
XX
PR 22-FEB-1996; 96US-0012061P.
XX
PA (UNMI) UNIV MICHIGAN.
PA (UNMS) UNIV MICHIGAN STATE.
XX
PI Brewer GJ, Venta PJ, Yuzbasiyan-Gurkan V;
XX
DR WPI; 1997-435083/40.
XX
PT New oligonucleotide primers amplifying gene regions conserved among
PT mammals - useful for developing genomic maps, isolating clones and making
PT cross-species comparisons.
XX
PS Claim 1; Page 11; 26pp; English.
XX
CC The present sequence represents a specifically claimed oligonucleotide
CC PCR primer. The oligonucleotide can be used for polymerase chain reaction
CC (PCR) amplification of DNA, specifically regions of specific genes that
CC are conserved among mammalian species, i.e. pairs of oligonucleotides
CC from the present specification represent universal mammalian sequence-
CC tagged site (UM-STS) primers. The primers are used to develop genomic
CC maps, to isolate clones from libraries, to make cross-species comparisons
CC and to develop additional genetic markers. UM-STS allow genomic
CC comparisons to be made between more species
XX
SQ Sequence 20 BP; 3 A; 7 C; 6 G; 4 T; 0 U; 0 Other;

Query Match 11.6%; Score 15.2; DB 1; Length 20;
Best Local Similarity 85.0%; Pred. No. 47;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 83 AGCATCGTCTTGATGCCCTT 102
|||| |||| |||||||||
Db 1 AGCAGCGTCCGGATGCCCTT 20

RESULT 24
ABZ86444
ID ABZ86444 standard; DNA; 20 BP.
XX
AC ABZ86444;
XX
DT 17-OCT-2003 (first entry)
XX
DE Human oligonucleotide sequence.
XX
KW Human; antisense; lung dysfunction; nasal airway dysfunction;
KW antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic;
KW antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy;
KW antisense gene therapy; respiratory; lung; adenosine sensitivity;
KW adenosine receptor; bronchodilation; bronchoconstriction; lung allergy;
KW lung inflammation; respiratory disease; ds.
XX
OS Homo sapiens.
XX
PN WO200285308-A2.
XX
PD 31-OCT-2002.
XX
PF 23-APR-2002; 2002WO-US013135.
XX
PR 24-APR-2001; 2001US-0286137P.
XX
PA (EPIG-) EPIGENESIS PHARM INC.
XX
PI Nyce JW, Li Y, Sandrasagra A, Katz E, Pabalan J, Aguilar D;
PI Miller S, Tang L, Shahabuddin S;
XX
DR WPI; 2003-229219/22.
XX
PT Pharmaceutical composition for treating ailments associated with impaired
PT respiration, has oligo(s) antisense to specific gene(s) or its
PT corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
PT ubiquinone.
XX
PS Claim 15; SEQ ID NO 1686; 872pp; English.
XX
CC The invention relates to a novel pharmaceutical composition, which has a
CC first active agent comprising an oligonucleotide antisense to the
CC initiation codon, coding region, 5' or 3' end genomic flanking regions,
CC 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of
CC junctions of genes encoding a polypeptide associated with lung and/or
CC nasal airway dysfunction and a second active agent comprising an
CC antiinflammatory steroid and ubiquinone. A composition of the invention
CC has antiinflammatory, antiallergic, antiasthmatic, hypotensive,
CC immunosuppressive, and cytostatic activity. The composition may have a
CC use in antisense gene therapy. The composition is useful for treating or
CC preventing a respiratory, lung or malignant disease or condition, also
CC for enhancing the prophylactic or therapeutic respiratory effect of an
CC antiinflammatory steroid in a subject, for reducing or depleting levels
CC of, or reducing sensitivity to adenosine, reducing levels of adenosine
CC receptor, producing bronchodilation, increasing levels of ubiquinone or
CC lung surfactant in a subject's tissue, or treating bronchoconstriction,
CC lung inflammation, lung allergies, or a respiratory disease or condition.
CC Note: The sequence data for this patent is not represented in the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 20 BP; 6 A; 4 C; 1 G; 9 T; 0 U; 0 Other;

Query Match 11.6%; Score 15.2; DB 1; Length 20;
Best Local Similarity 85.0%; Pred. No. 47;
Matches 17; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 19 TTATACTTGTAATCTATCTA 38
||||| |||||||||||
Db 1 TTATATCTGTAATCTATCCA 20

RESULT 25
ABD22674
ID ABD22674 standard; DNA; 20 BP.
XX
AC ABD22674;
XX
DT 29-JUL-2004 (first entry)
XX
DE Human myosin X-derived oligonucleotide SEQ ID 1686.
XX
KW Human; antisense; bronchoconstriction; allergy; hyposecretion; pain;
KW respiratory tract inflammation; adenosine sensitivity; lung; cancer;
KW surfactant depletion; antiallergic; antiinflammatory; antiasthmatic;
KW analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis;
KW beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction;
KW respiratory distress syndrome; allergic rhinitis; pulmonary hypertension;
KW emphysema; chronic obstructive pulmonary disease; cancer; bronchitis;
KW pulmonary transplantation rejection; ss; primer.
XX
OS Homo sapiens.
XX
PN WO200285309-A2.
XX
PD 31-OCT-2002.
XX
PF 23-APR-2002; 2002WO-US013143.
XX
PR 24-APR-2001; 2001US-0286036P.
XX
PA (EPIG-) EPIGENESIS PHARM INC.

```
XX
PI   Nyce JW,  Li Y,  Sandrasagra A,  Katz E,  Pabalan J,  Aguilar D;
PI   Miller S,  Tang L,  Shahabuddin S;
XX
DR   WPI; 2003-093058/08.
XX
PT   Pharmaceutical composition for treating asthma, has antisense
PT   oligonucleotide containing less percentage of adenosine, targeted to
PT   nucleic acids associated with lung airway or lung dysfunction, and
PT   bronchodilating agent.
XX
PS   Claim 15; SEQ ID NO 1686; 763pp; English.
XX
CC   This invention describes a novel composition (a) a first active agent,
CC   comprising oligonucleotides, effective for alleviating
CC   bronchoconstriction, respiratory tract inflammation, allergies and
CC   reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors,
CC   surfactant depletion or hyposecretion, when administered to a mammal. The
CC   oligonucleotides are derived from a gene encoding or regulating
CC   expression of a target polypeptide associated with lung airway or lung
CC   dysfunction or cancer and can be anti-sense to the corresponding mRNA.
CC   The invention also describes a kit, that comprises: (a) a delivery
CC   device, in separate containers, (b) the oligonucleotides, (c)
CC   instructions for adding a carrier and for use of the kit. The composition
CC   of the invention has antiallergic, antiinflammatory, antiasthmatic,
CC   analgesic, hypotensive, immunosuppressive and cytostatic activity, is a
CC   beta-adrenergic agonist. The composition is useful for preventing or
CC   treating a respiratory, lung or malignant disease. The administered
CC   composition comprises oligo and is administered to reduce the production
CC   or availability, or to increase the degradation of the target mRNA or to
CC   reduce the amount of target polypeptide present in the lungs. The
CC   pulmonary obstruction, and/or bronchoconstriction and/or lung
CC   inflammation, allergies and/or surfactant hypoproduction are associated
CC   with a disease or condition such as pulmonary vasoconstriction,
CC   inflammation, allergies, asthma, impeded respiration, respiratory
CC   distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary
CC   hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary
CC   transplantation rejection, pulmonary infections, bronchitis or cancer.
CC   The reduced adenosine content of the anti-sense oligos corresponding to
CC   thymidines present in the target RNA serves to prevent the breakdown of
CC   the oligonucleotides into products that free adenosine into the system
CC   e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to
CC   prevent any unwanted effects due to it
XX
SQ   Sequence 20 BP; 6 A; 4 C; 1 G; 9 T; 0 U; 0 Other;

  Query Match             11.6%;  Score 15.2;  DB 1;  Length 20;
  Best Local Similarity   85.0%;  Pred. No. 47;
  Matches   17;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy         19 TTATACTTGTAATCTATCTA 38
              |||||  |||||||||||  |
Db          1 TTATATCTGTAATCTATCCA 20


RESULT 26
ABN83051/c
ID   ABN83051 standard; RNA; 82 BP.
XX
AC   ABN83051;
XX
DT   16-AUG-2002  (first entry)
XX
DE   GpITh1P6.131 aptamer construct.
XX
KW   Aptazyme; regulatable; aptamer; luciferase; cyclic AMP; ss; GpITh1P6.131.
XX
OS   Unidentified.
XX
FH   Key             Location/Qualifiers
FT   misc_binding    4. .9
FT                   /*tag=  a
FT                   /bound_moiety= "Bases 33-28"
FT   stem_loop       14. .24
FT                   /*tag=  b
FT   misc_binding    28. .33
FT                   /*tag=  c
FT                   /bound_moiety= "Bases 9-4"
FT   misc_binding    34. .35
FT                   /*tag=  c
FT                   /bound_moiety= "Bases 79-78"
FT   misc_binding    41
FT                   /*tag=  d
FT                   /bound_moiety= "Base 72"
FT   misc_binding    45. .46
FT                   /*tag=  e
FT                   /bound_moiety= "Bases 68-67"
FT   stem_loop       48. .62
FT                   /*tag=  f
FT   misc_binding    67. .68
FT                   /*tag=  g
FT                   /bound_moiety= "Bases 46-45"
FT   misc_binding    72
FT                   /*tag=  h
FT                   /bound_moiety= "Base 41"
FT   misc_binding    78. .79
FT                   /*tag=  i
FT                   /bound_moiety= "Bases 35-34"
XX
PN   WO200196541-A2.
XX
PD   20-DEC-2001.
XX
PF   15-JUN-2001; 2001WO-US019119.
XX
PR   15-JUN-2000; 2000US-00661658.
XX
PA   (TEXA ) UNIV TEXAS.
XX
PI   Ellington AD,  Hesselberth J,  Marshall K,  Robertson M,  Sooter L;
PI   Davidson E,  Cox JC,  Reidel T;
XX
DR   WPI; 2002-090203/12.
XX
PT   Aptazyme construct for detecting the presence of ligands, comprises a
PT   regulatable Group I intron aptamer oligonucleotide with a regulatory
PT   domain, and modulates their kinetic parameters in response to an
PT   effector.
XX
PS   Disclosure; Fig 2A; 42pp; English.
XX
CC   The sequence represents the GpITh1P6.131 aptamer construct used in the
CC   invention. The invention relates to a novel aptazyme construct comprising
CC   a regulatable Group I intron aptamer oligonucleotide sequence having an
CC   allosterically regulatable regulatory domain, where the kinetic
CC   parameters of the aptazyme on a target gene vary in response to the
CC   interaction of an allosteric effector molecule with the regulatory
CC   domain, and the intron splicing reaction occurs in vitro. The aptazyme is
CC   useful: (1) in assays to detect the presence of ligands or to detect
CC   activation of an aptazyme by an effector; (2) in the identification,
CC   isolation and enhancement of allosteric effectors and of the
CC   allosterically regulatable aptazymes with which they interact; (3) to
CC   activate or repress a reporter gene (e.g. luciferase) containing an
CC   engineered intron in response to an endogenous activator; and (4) to
CC   monitor intracellular levels of proteins or small molecules such as
CC   cyclic AMP
XX
SQ   Sequence 82 BP; 24 A; 21 C; 16 G; 0 T; 21 U; 0 Other;

  Query Match             10.8%;  Score 14.2;  DB 1;  Length 82;
  Best Local Similarity   62.9%;  Pred. No. 29;
  Matches   22;  Conservative    0;  Mismatches   13;  Indels    0;  Gaps    0;

Qy         58 AGACAATCCCGTGCTAAATTATACCAGCATCGTCT 92
              |||| || | |   ||| |||   | | || ||||
Db         56 AGACGATGCTGGTATAATTTAGCACGGGATTGTCT 22
```

```
RESULT 27
AAL43067/c
ID   AAL43067 standard; RNA; 82 BP.
XX
AC   AAL43067;
XX
DT   25-SEP-2002  (first entry)
XX
DE   Regulatable, catalytically active nucleic acid #2.
XX
KW   Regulatable catalytically active nucleic acid; RCANA; ribozyme;
KW   gene therapy; ss.
XX
OS   Unidentified.
XX
FH   Key             Location/Qualifiers
FT   misc_binding    4. .8
FT                   /*tag=  a
FT                   /bound_moiety= "binds nucleotides 33-29 of itself"
FT   stem_loop       14. .24
FT                   /*tag=  b
FT   misc_binding    29. .33
FT                   /*tag=  c
FT                   /bound_moiety= "binds nucleotides 8-4 of itself"
FT   misc_binding    34. .35
FT                   /*tag=  d
FT                   /bound_moiety= "binds nucleotides 79-78 of itself"
FT   misc_binding    41
FT                   /*tag=  e
FT                   /bound_moiety= "binds nucleotide 72 of itself"
FT   misc_binding    45. .46
FT                   /*tag=  f
FT                   /bound_moiety= "binds nucleotides 68-67 of itself"
FT   stem_loop       48. .62
FT                   /*tag=  g
FT   misc_binding    67. .68
FT                   /*tag=  h
FT                   /bound_moiety= "binds nucleotides 46-45 of itself"
FT   misc_binding    72
FT                   /*tag=  i
FT                   /bound_moiety= "binds nucleotide 41 of itself"
FT   misc_binding    78. .79
FT                   /*tag=  j
FT                   /bound_moiety= "binds nucleotides 35-34 of itself"
XX
PN   WO200196559-A2.
XX
PD   20-DEC-2001.
XX
PF   14-JUN-2001; 2001WO-US019302.
XX
PR   15-JUN-2000; 2000US-0212097P.
XX
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Ellington AD,  Hesselberth J,  Marshall K,  Robertson M,  Sooter L;
PI   Davidson E,  Cox JC,  Reidel T;
XX
DR   WPI; 2002-122216/16.
XX
PT   New regulatable, catalytically active nucleic acids (RCANA), useful in
PT   gene therapy (particularly for regulating gene expression), or in assays
PT   for detecting the presence of ligands or activation of an effector of
PT   RCANA.
XX
PS   Example 1; Fig 2A; 126pp; English.
XX
CC   The present invention relates to regulatable, catalytically active
CC   nucleic acids (RCANAs) which are regulated by polypeptides. These are
CC   useful for regulating gene expression, in assays for detecting the
CC   presence of ligands, for activation of an effector of RCANA, and in gene
CC   therapy. The present sequence is an RCANA described in the
CC   exemplification of the invention
XX
SQ   Sequence 82 BP; 24 A; 21 C; 16 G; 0 T; 21 U; 0 Other;

  Query Match             10.8%;  Score 14.2;  DB 1;  Length 82;
  Best Local Similarity   62.9%;  Pred. No. 29;
  Matches   22;  Conservative    0;  Mismatches   13;  Indels    0;  Gaps    0;

Qy         58 AGACAATCCCGTGCTAAATTATACCAGCATCGTCT 92
              |||| || | |   ||| |||   | | || ||||
Db         56 AGACGATGCTGGTATAATTTAGCACGGGATTGTCT 22


RESULT 28
AAL43090/c
ID   AAL43090 standard; RNA; 82 BP.
XX
AC   AAL43090;
XX
DT   25-SEP-2002  (first entry)
XX
DE   Regulatable, catalytically active nucleic acid #22.
XX
KW   Regulatable catalytically active nucleic acid; RCANA; ribozyme;
KW   gene therapy; ss.
XX
OS   Unidentified.
XX
FH   Key             Location/Qualifiers
FT   misc_binding    4. .8
FT                   /*tag=  a
FT                   /bound_moiety= "binds nucleotides 33-29 of itself"
FT   stem_loop       14. .24
FT                   /*tag=  b
FT   misc_binding    29. .33
FT                   /*tag=  c
FT                   /bound_moiety= "binds nucleotides 8-4 of itself"
FT   misc_binding    34. .35
FT                   /*tag=  d
FT                   /bound_moiety= "binds nucleotides 79-78 of itself"
FT   misc_binding    41
FT                   /*tag=  e
FT                   /bound_moiety= "binds nucleotide 72 of itself"
FT   misc_binding    45. .46
FT                   /*tag=  f
FT                   /bound_moiety= "binds nucleotides 68-67 of itself"
FT   stem_loop       48. .62
FT                   /*tag=  g
FT   misc_binding    67. .68
FT                   /*tag=  h
FT                   /bound_moiety= "binds nucleotides 46-45 of itself"
FT   misc_binding    72
FT                   /*tag=  i
FT                   /bound_moiety= "binds nucleotide 41 of itself"
FT   misc_binding    78. .79
FT                   /*tag=  j
FT                   /bound_moiety= "binds nucleotides 35-34 of itself"
XX
PN   WO200196559-A2.
XX
PD   20-DEC-2001.
XX
PF   14-JUN-2001; 2001WO-US019302.
XX
PR   15-JUN-2000; 2000US-0212097P.
XX
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Ellington AD,  Hesselberth J,  Marshall K,  Robertson M,  Sooter L;
PI   Davidson E,  Cox JC,  Reidel T;
XX
DR   WPI; 2002-122216/16.
```

```
XX
PT   New regulatable, catalytically active nucleic acids (RCANA), useful in
PT   gene therapy (particularly for regulating gene expression), or in assays
PT   for detecting the presence of ligands or activation of an effector of
PT   RCANA.
XX
PS   Example 5; Fig 25B; 126pp; English.
XX
CC   The present invention relates to regulatable, catalytically active
CC   nucleic acids (RCANAs) which are regulated by polypeptides. These are
CC   useful for regulating gene expression, in assays for detecting the
CC   presence of ligands, for activation of an effector of RCANA, and in gene
CC   therapy. The present sequence is an RCANA described in the
CC   exemplification of the invention
XX
SQ   Sequence 82 BP; 24 A; 21 C; 16 G; 0 T; 21 U; 0 Other;

  Query Match             10.8%;  Score 14.2;  DB 1;  Length 82;
  Best Local Similarity   62.9%;  Pred. No. 29;
  Matches   22;  Conservative    0;  Mismatches   13;  Indels    0;  Gaps    0;

Qy         58 AGACAATCCCGTGCTAAATTATACCAGCATCGTCT 92
              |||| || | |   ||| |||   | | || ||||
Db         56 AGACGATGCTGGTATAATTTAGCACGGGATTGTCT 22


RESULT 29
ADQ96971/c
ID   ADQ96971 standard; RNA; 82 BP.
XX
AC   ADQ96971;
XX
DT   23-SEP-2004  (first entry)
XX
DE   T4 theophylline-dependent intron -based RCANA GPITH1P6.133 #1.
XX
KW   RCANA; catalytically active regulatable nucleic acid; ss; ribozyme;
KW   aptamer; effector domain; nucleic acid catalyst domain; gene therapy;
KW   industrial biosynthesis; bioremediation; bacteriophage T4;
KW   thymidylate synthase; self-splicing intron.
XX
OS   Enterobacteria phage T4.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_binding    4. .8
FT                   /*tag=  a
FT                   /bound_moiety= "Bases 33-29 of the present sequence"
FT   stem_loop       14. .24
FT                   /*tag=  b
FT   misc_binding    29. .33
FT                   /*tag=  c
FT                   /bound_moiety= "Bases 8-4 of the present sequence"
FT   misc_binding    34. .35
FT                   /*tag=  d
FT                   /bound_moiety= "Bases 79-78 of the present sequence"
FT   misc_binding    41
FT                   /*tag=  e
FT                   /bound_moiety= "Base 72 of the present sequence"
FT   misc_binding    45. .46
FT                   /*tag=  f
FT                   /bound_moiety= "Bases 68-67 of the present sequence"
FT   stem_loop       48. .62
FT                   /*tag=  g
FT   misc_binding    67. .68
FT                   /*tag=  h
FT                   /bound_moiety= "Bases 46-45 of the present sequence"
FT   misc_binding    72
FT                   /*tag=  i
FT                   /bound_moiety= "Base 41 of the present sequence"
FT   misc_binding    78. .79
FT                   /*tag=  j
FT                   /bound_moiety= "Bases 35-34 of the present sequence"
XX
PN   US2004126882-A1.
XX
PD   01-JUL-2004.
XX
PF   24-SEP-2002; 2002US-00254568.
XX
PR   15-JUN-2000; 2000US-0212097P.
PR   14-SEP-2000; 2000US-00661658.
PR   20-SEP-2000; 2000US-00666870.
PR   14-JUN-2001; 2001US-00883119.
PR   24-SEP-2001; 2001US-0324715P.
XX
PA   (ELLI/) ELLINGTON A D.
PA   (HESS/) HESSELBERTH J.
PA   (THOM/) THOMPSON K.
PA   (ROBE/) ROBERTSON M P.
PA   (SOOT/) SOOTER L.
PA   (DAVI/) DAVIDSON E.
PA   (COXJ/) COX J C.
PA   (RIED/) RIEDEL T.
PA   (WILS/) WILSON C.
PA   (CLOA/) CLOAD S T.
PA   (KEEF/) KEEFE A D.
XX
PI   Ellington AD,  Hesselberth J,  Thompson K,  Robertson MP,  Sooter L;
PI   Davidson E,  Cox JC,  Riedel T,  Wilson C,  Cload ST,  Keefe AD;
XX
DR   WPI; 2004-560517/54.
XX
PT   Novel regulatable, catalytically active nucleic acid comprising effector
PT   domain, and catalyst domain which comprises randomized catalytic residues
PT   and is regulated by effector that interacts with effector domain.
XX
PS   Example 1; SEQ ID NO 38; 78pp; English.
XX
CC   The invention relates to a regulatable, catalytically active nucleic acid
CC   (RCANA) segment comprising an effector domain and a nucleic acid catalyst
CC   domain in which one or more critical catalytic residues of the nucleic
CC   acid catalyst have been randomised, where the kinetic parameters of the
CC   catalytic domain are regulated by an effector that interacts with the
CC   effector domain. Also included are a nucleic acid comprising a gene, a
CC   RCANA inserted within the gene (where the presence of an effector causes
CC   the nucleic acid to catalyse a reaction), isolating an RCANA (comprising
CC   a catalytic and an effector domain involving randomising at least one
CC   nucleotide in the catalytic domain of a catalytically active nucleic acid
CC   to create a nucleic acid pool, removing from the nucleic acid pool those
CC   nucleic acids that interact with the catalytic target of the catalytic
CC   domain, adding an effector molecule to the nucleic acids and isolating
CC   those nucleic acids that interact with the catalytic target of the
CC   catalytic domain), detection of a target using a RCANA, modifying a
CC   target using a RCANA (involving providing a RCANA capable of target-
CC   specific modification and modifying the target under conditions that
CC   cause a RCANA-specific activity), selecting an RCANA and detecting an
CC   RCANA (involving isolating an RCANA, creating a construct in which the
CC   nucleic acid is in position to regulate the expression of a reporter
CC   gene, introducing the construct into a host cell and measuring the
CC   catalytic activity of the nucleic acid upon exposure of the host cell to
CC   the effector. The RCANA is useful for regulating production of a product
CC   in a cell (by gene therapy) which involves inserting into a gene that
CC   produces the product or regulates the production of the product in the
CC   cell an RCANA which comprises a catalytic domain, that modifies a
CC   transcript to alter its coding potential, and a regulatory domain which
CC   recognises an effector that alters the function of the catalytic domain,
CC   contacting the regulatory domain with an effector thereby regulating
CC   production of the product. The concentration of the effector modulates
CC   the activity of the catalytic domain of the RCANA. The production of the
CC   product is fully inhibited or is increased compared to a normal control
CC   level, or is partially inhibited according to the concentration of the
CC   effector. The RCANA blocks or activates expression of the gene. The
CC   effector is the product, where it accesses feedback inhibitor of the
CC   gene. The product is produced in a metabolic pathway that is being
CC   regulated, and the effector or the product is an intermediate in a
```

```
CC   metabolic pathway. The effector is endogenous or exogenous to the cell.
CC   The effector is an end product of a biosynthetic process. The effector or
CC   the product is chosen from protein, enzyme, protein pharmaceutical,
CC   metabolite, drug, dye, vitamin, food additive, chemical additive,
CC   pesticide, insecticide, feed compound, and a waste product. The drug is
CC   chosen from antibiotics, anticancer drugs, antifungals, cholesterol-
CC   lowering drugs, and immunosuppressants. The RCANA is useful for
CC   regulating a biological pathway in a cell, for screening a population of
CC   cells for a cell that produces a bioproduct, for modulating expression of
CC   a nucleic acid, in gene therapy applications, and for facilitating
CC   industrial biosynthesis and bioremediation. The present sequence is an
CC   RCANA based on the bacteriophage T4 thymidylate synthase gene self-
CC   splicing intron.
XX
SQ   Sequence 82 BP; 24 A; 21 C; 16 G; 0 T; 21 U; 0 Other;

  Query Match             10.8%;  Score 14.2;  DB 1;  Length 82;
  Best Local Similarity   62.9%;  Pred. No. 29;
  Matches   22;  Conservative    0;  Mismatches   13;  Indels    0;  Gaps    0;

Qy         58 AGACAATCCCGTGCTAAATTATACCAGCATCGTCT 92
              |||| || | |   ||| |||   | | || ||||
Db         56 AGACGATGCTGGTATAATTTAGCACGGGATTGTCT 22


RESULT 30
ADQ96997/c
ID   ADQ96997 standard; RNA; 82 BP.
XX
AC   ADQ96997;
XX
DT   23-SEP-2004  (first entry)
XX
DE   Theophylline-dependent group I intron RCANA Th1P6.
XX
KW   RCANA; catalytically active regulatable nucleic acid; ss; ribozyme;
KW   aptamer; effector domain; nucleic acid catalyst domain; gene therapy;
KW   industrial biosynthesis; bioremediation; bacteriophage T4;
KW   thymidylate synthase; self-splicing intron.
XX
OS   Enterobacteria phage T4.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   misc_binding    4. .8
FT                   /*tag=  a
FT                   /bound_moiety= "Bases 33-29 of the present sequence"
FT   stem_loop       14. .24
FT                   /*tag=  b
FT   misc_binding    29. .33
FT                   /*tag=  c
FT                   /bound_moiety= "Bases 8-4 of the present sequence"
FT   misc_binding    34. .35
FT                   /*tag=  d
FT                   /bound_moiety= "Bases 78-79 of the present sequence"
FT   misc_binding    41
FT                   /*tag=  e
FT                   /bound_moiety= "Base 72 of the present sequence"
FT   misc_binding    45. .46
FT                   /*tag=  f
FT                   /bound_moiety= "Bases 68-67 of the present sequence"
FT   stem_loop       48. .62
FT                   /*tag=  g
FT   misc_binding    67. .68
FT                   /*tag=  h
FT                   /bound_moiety= "Bases 46-45 of the present sequence"
FT   misc_binding    72
FT                   /*tag=  i
FT                   /bound_moiety= "Base 41 of the present sequence"
FT   misc_binding    78. .79
FT                   /*tag=  j
FT                   /bound_moiety= "Bases 35-34 of the present sequence"
XX
PN   US2004126882-A1.
XX
PD   01-JUL-2004.
XX
PF   24-SEP-2002; 2002US-00254568.
XX
PR   15-JUN-2000; 2000US-0212097P.
PR   14-SEP-2000; 2000US-00661658.
PR   20-SEP-2000; 2000US-00666870.
PR   14-JUN-2001; 2001US-00883119.
PR   24-SEP-2001; 2001US-0324715P.
XX
PA   (ELLI/) ELLINGTON A D.
PA   (HESS/) HESSELBERTH J.
PA   (THOM/) THOMPSON K.
PA   (ROBE/) ROBERTSON M P.
PA   (SOOT/) SOOTER L.
PA   (DAVI/) DAVIDSON E.
PA   (COXJ/) COX J C.
PA   (RIED/) RIEDEL T.
PA   (WILS/) WILSON C.
PA   (CLOA/) CLOAD S T.
PA   (KEEF/) KEEFE A D.
XX
PI   Ellington AD,  Hesselberth J,  Thompson K,  Robertson MP,  Sooter L;
PI   Davidson E,  Cox JC,  Riedel T,  Wilson C,  Cload ST,  Keefe AD;
XX
DR   WPI; 2004-560517/54.
XX
PT   Novel regulatable, catalytically active nucleic acid comprising effector
PT   domain, and catalyst domain which comprises randomized catalytic residues
PT   and is regulated by effector that interacts with effector domain.
XX
PS   Example 5; SEQ ID NO 65; 78pp; English.
XX
CC   The invention relates to a regulatable, catalytically active nucleic acid
CC   (RCANA) segment comprising an effector domain and a nucleic acid catalyst
CC   domain in which one or more critical catalytic residues of the nucleic
CC   acid catalyst have been randomised, where the kinetic parameters of the
CC   catalytic domain are regulated by an effector that interacts with the
CC   effector domain. Also included are a nucleic acid comprising a gene, a
CC   RCANA inserted within the gene (where the presence of an effector causes
CC   the nucleic acid to catalyse a reaction), isolating an RCANA (comprising
CC   a catalytic and an effector domain involving randomising at least one
CC   nucleotide in the catalytic domain of a catalytically active nucleic acid
CC   to create a nucleic acid pool, removing from the nucleic acid pool those
CC   nucleic acids that interact with the catalytic target of the catalytic
CC   domain, adding an effector molecule to the nucleic acids and isolating
CC   those nucleic acids that interact with the catalytic target of the
CC   catalytic domain), detection of a target using a RCANA, modifying a
CC   target using a RCANA (involving providing a RCANA capable of target-
CC   specific modification and modifying the target under conditions that
CC   cause a RCANA-specific activity), selecting an RCANA and detecting an
CC   RCANA (involving isolating an RCANA, creating a construct in which the
CC   nucleic acid is in position to regulate the expression of a reporter
CC   gene, introducing the construct into a host cell and measuring the
CC   catalytic activity of the nucleic acid upon exposure of the host cell to
CC   the effector. The RCANA is useful for regulating production of a product
CC   in a cell (by gene therapy) which involves inserting into a gene that
CC   produces the product or regulates the production of the product in the
CC   cell an RCANA which comprises a catalytic domain, that modifies a
CC   transcript to alter its coding potential, and a regulatory domain which
CC   recognises an effector that alters the function of the catalytic domain,
CC   contacting the regulatory domain with an effector thereby regulating
CC   production of the product. The concentration of the effector modulates
CC   the activity of the catalytic domain of the RCANA. The production of the
CC   product is fully inhibited or is increased compared to a normal control
CC   level, or is partially inhibited according to the concentration of the
CC   effector. The RCANA blocks or activates expression of the gene. The
CC   effector is the product, where it accesses feedback inhibitor of the
CC   gene. The product is produced in a metabolic pathway that is being
CC   regulated, and the effector or the product is an intermediate in a
CC   metabolic pathway. The effector is endogenous or exogenous to the cell.
```

```
CC   The effector is an end product of a biosynthetic process. The effector or
CC   the product is chosen from protein, enzyme, protein pharmaceutical,
CC   metabolite, drug, dye, vitamin, food additive, chemical additive,
CC   pesticide, insecticide, feed compound, and a waste product. The drug is
CC   chosen from antibiotics, anticancer drugs, antifungals, cholesterol-
CC   lowering drugs, and immunosuppressants. The RCANA is useful for
CC   regulating a biological pathway in a cell, for screening a population of
CC   cells for a cell that produces a bioproduct, for modulating expression of
CC   a nucleic acid, in gene therapy applications, and for facilitating
CC   industrial biosynthesis and bioremediation. The present sequence is an
CC   RCANA based on the bacteriophage T4 thymidylate synthase gene self-
CC   splicing intron.
XX
SQ   Sequence 82 BP; 24 A; 21 C; 16 G; 0 T; 21 U; 0 Other;

  Query Match             10.8%;  Score 14.2;  DB 1;  Length 82;
  Best Local Similarity   62.9%;  Pred. No. 29;
  Matches   22;  Conservative    0;  Mismatches   13;  Indels    0;  Gaps    0;

Qy         58 AGACAATCCCGTGCTAAATTATACCAGCATCGTCT 92
              |||| || | |   ||| |||   | | || ||||
Db         56 AGACGATGCTGGTATAATTTAGCACGGGATTGTCT 22


RESULT 31
ACF63061/c
ID   ACF63061 standard; DNA; 18 BP.
XX
AC   ACF63061;
XX
DT   09-OCT-2003  (first entry)
XX
DE   Human progesterone receptor PCR primer SEQ ID NO:310.
XX
KW   Human; colon cancer; oestrogen receptor; myoglobin; p21; p27; p16; p53;
KW   progesterone receptor; pcna; CEA; cdc2; c-erbB2; methylation; CpG;
KW   characterisation; classification; diagnosis; differentiation;
KW   colon cell proliferative disorder; PCR primer; ss.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO2003014388-A2.
XX
PD   20-FEB-2003.
XX
PF   09-AUG-2002; 2002WO-EP008939.
XX
PR   09-AUG-2001; 2001DE-01039283.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Distler J,  Model F,  Taubert H;
XX
DR   WPI; 2003-256600/25.
XX
PT   Determining methylation status of CpG dinucleotides using modified
PT   genomic sequences, oligonucleotides and/or PNA-oligomers, useful in the
PT   characterization, grading, staging and/or diagnosis of colon cancer.
XX
PS   Claim 26; Page 177; 219pp; English.
XX
CC   The present invention describes a method for determining the methylation
CC   status of CpG dinucleotides within the genes for oestrogen receptor, p21,
CC   p27, p16, progesterone receptor, myoglobin, pcna, cdc2, c-erB2, p53
CC   and/or CEA, which comprises contacting the target nucleic acid with a
CC   reagent that distinguishes between methylated and non-methylated CpG
CC   dinucleotides, and determining from the methylation status of the CpG
CC   positions the presence of a colon cancer. A set of oligomers or peptide
CC   nucleic acid (PNA)-oligomers can be used as probes for determining the
CC   cytosine methylation state and/or single nucleotide polymorphisms (SNP)
CC   of a corresponding genomic DNA by analysis of a chemically pretreated
CC   genomic DNA. The pretreated genomic DNA is useful for the determination
CC   of the methylation status of a corresponding genomic DNA and/or detection
CC   of SNPs. The methods and pretreated genomic DNA are also useful for the
CC   characterisation, classification, diagnosis and differentiation of colon
CC   cell proliferative disorders. ACF62752 to ACF63278 represent sequences
CC   used in the exemplification of the present invention
XX
SQ   Sequence 18 BP; 5 A; 1 C; 7 G; 5 T; 0 U; 0 Other;

  Query Match             10.5%;  Score 13.8;  DB 1;  Length 18;
  Best Local Similarity   88.2%;  Pred. No. 64;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         61 CAATCCCGTGCTAAATT 77
              ||||||| ||||||||
Db         18 CAATCCCTCGCTAAATT 2


RESULT 32
ACF63063
ID   ACF63063 standard; DNA; 18 BP.
XX
AC   ACF63063;
XX
DT   09-OCT-2003  (first entry)
XX
DE   Human progesterone receptor PCR primer SEQ ID NO:312.
XX
KW   Human; colon cancer; oestrogen receptor; myoglobin; p21; p27; p16; p53;
KW   progesterone receptor; pcna; CEA; cdc2; c-erbB2; methylation; CpG;
KW   characterisation; classification; diagnosis; differentiation;
KW   colon cell proliferative disorder; PCR primer; ss.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO2003014388-A2.
XX
PD   20-FEB-2003.
XX
PF   09-AUG-2002; 2002WO-EP008939.
XX
PR   09-AUG-2001; 2001DE-01039283.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Distler J,  Model F,  Taubert H;
XX
DR   WPI; 2003-256600/25.
XX
PT   Determining methylation status of CpG dinucleotides using modified
PT   genomic sequences, oligonucleotides and/or PNA-oligomers, useful in the
PT   characterization, grading, staging and/or diagnosis of colon cancer.
XX
PS   Claim 26; Page 178; 219pp; English.
XX
CC   The present invention describes a method for determining the methylation
CC   status of CpG dinucleotides within the genes for oestrogen receptor, p21,
CC   p27, p16, progesterone receptor, myoglobin, pcna, cdc2, c-erB2, p53
CC   and/or CEA, which comprises contacting the target nucleic acid with a
CC   reagent that distinguishes between methylated and non-methylated CpG
CC   dinucleotides, and determining from the methylation status of the CpG
CC   positions the presence of a colon cancer. A set of oligomers or peptide
CC   nucleic acid (PNA)-oligomers can be used as probes for determining the
CC   cytosine methylation state and/or single nucleotide polymorphisms (SNP)
CC   of a corresponding genomic DNA by analysis of a chemically pretreated
CC   genomic DNA. The pretreated genomic DNA is useful for the determination
CC   of the methylation status of a corresponding genomic DNA and/or detection
CC   of SNPs. The methods and pretreated genomic DNA are also useful for the
CC   characterisation, classification, diagnosis and differentiation of colon
CC   cell proliferative disorders. ACF62752 to ACF63278 represent sequences
CC   used in the exemplification of the present invention
XX
SQ   Sequence 18 BP; 5 A; 7 C; 1 G; 5 T; 0 U; 0 Other;
```

```
  Query Match             10.5%;  Score 13.8;  DB 1;  Length 18;
  Best Local Similarity   88.2%;  Pred. No. 64;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         61 CAATCCCGTGCTAAATT 77
              ||||||| ||||||||
Db          1 CAATCCCTCGCTAAATT 17


RESULT 33
ADB54669/c
ID   ADB54669 standard; DNA; 18 BP.
XX
AC   ADB54669;
XX
DT   04-DEC-2003  (first entry)
XX
DE   Hybridisation oligonucleotide 207 used to analyse genomic DNA region.
XX
KW   colon cell proliferative disorder; non methylated CpG dinucleotide;
KW   cytostatic; cancer; adenoma; carcinoma; cytosine methylation state; ss;
KW   probe.
XX
OS   Unidentified.
XX
PN   WO2003072821-A2.
XX
PD   04-SEP-2003.
XX
PF   27-FEB-2003; 2003WO-EP002035.
XX
PR   27-FEB-2002; 2002EP-00004551.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Adorjan P,  Burger M,  Maier S,  Nimmrich I,  Becker E,  Lesche R;
PI   Rujan T,  Schmitt A;
XX
DR   WPI; 2003-731620/69.
XX
PT   Detecting and differentiating between colon cell proliferative disorders
PT   associated with a gene or its regulatory regions comprises contacting a
PT   target nucleic acid in a biological sample obtained from the subject with
PT   a reagent.
XX
PS   Claim 36; Page 38; 74pp; English.
XX
CC   The invention relates to a novel method for detecting and differentiating
CC   between colon cell proliferative disorders associated with at least one
CC   gene or its regulatory regions. The method comprises contacting a target
CC   nucleic acid in a biological sample obtained from the subject with at
CC   least one reagent or a series of reagents, where the reagent or series of
CC   reagents, distinguishes between methylated and non methylated CpG
CC   dinucleotides within the target nucleic acid. The molecules of the
CC   invention demonstrate cytostatic activity whilst the method may useful
CC   for detecting and differentiating between colon cell proliferative
CC   disorders, including cancers such as colon adenoma and colon carcinoma.
CC   The PNA (peptide nucleic acid)-oligomers are useful as probes for
CC   determining cytosine methylation state or single nucleotide
CC   polymorphisms. The current sequence is that of the hybridisation
CC   oligonucleotide of the invention which was used to analyse the genomic
CC   DNA region.
XX
SQ   Sequence 18 BP; 5 A; 1 C; 7 G; 5 T; 0 U; 0 Other;

  Query Match             10.5%;  Score 13.8;  DB 1;  Length 18;
  Best Local Similarity   88.2%;  Pred. No. 64;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         61 CAATCCCGTGCTAAATT 77
              ||||||| ||||||||
Db         18 CAATCCCTCGCTAAATT 2


RESULT 34
AAL43048/c
ID   AAL43048 standard; DNA; 94 BP.
XX
AC   AAL43048;
XX
DT   25-SEP-2002  (first entry)
XX
DE   Regulatable, catalytically active nucleic acid construction oligo #7.
XX
KW   Regulatable catalytically active nucleic acid; RCANA; ribozyme;
KW   gene therapy; ds.
XX
OS   Synthetic.
XX
PN   WO200196559-A2.
XX
PD   20-DEC-2001.
XX
PF   14-JUN-2001; 2001WO-US019302.
XX
PR   15-JUN-2000; 2000US-0212097P.
XX
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Ellington AD,  Hesselberth J,  Marshall K,  Robertson M,  Sooter L;
PI   Davidson E,  Cox JC,  Reidel T;
XX
DR   WPI; 2002-122216/16.
XX
PT   New regulatable, catalytically active nucleic acids (RCANA), useful in
PT   gene therapy (particularly for regulating gene expression), or in assays
PT   for detecting the presence of ligands or activation of an effector of
PT   RCANA.
XX
PS   Example 5; Page 68; 126pp; English.
XX
CC   The present invention relates to regulatable, catalytically active
CC   nucleic acids (RCANAs) which are regulated by polypeptides. These are
CC   useful for regulating gene expression, in assays for detecting the
CC   presence of ligands, for activation of an effector of RCANA, and in gene
CC   therapy. The present sequence is an oligonucleotide used in the
CC   construction of an RCANA
XX
SQ   Sequence 94 BP; 27 A; 23 C; 17 G; 27 T; 0 U; 0 Other;

  Query Match             10.4%;  Score 13.6;  DB 1;  Length 94;
  Best Local Similarity   80.0%;  Pred. No. 30;
  Matches   16;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          6 AGTATAAGGTGACTTATACT 25
              ||||||||    ||||||||
Db         25 AGTATAAGTCACCTTATACT 6


RESULT 35
ADA39564/c
ID   ADA39564 standard; DNA; 94 BP.
XX
AC   ADA39564;
XX
DT   20-NOV-2003  (first entry)
XX
DE   RCANA construction related oligonucleotide SEQ ID NO:20.
XX
KW   regulatable catalytically active nucleic acid; RCANA; catalytic domain;
KW   regulation; screening; gene therapy; biological pathway regulation;
KW   regulatory element; metabolic pathway; ribozyme; ss.
XX
OS   Synthetic.
XX
```

PN WO2003027310-A2.
XX
PD 03-APR-2003.
XX
PF 24-SEP-2002; 2002WO-US030458.
XX
PR 24-SEP-2001; 2001US-0324715P.
XX
PA (ARCH-) ARCHEMIX CORP.
XX
PI Wilson C, Cload ST, Keefe AD;
XX
DR WPI; 2003-354657/33.
XX
PT Regulating production of a product in a cell, comprises inserting a
PT regulatable catalytically active nucleic acid into a gene that produces
PT the product or regulates the production of the product in the cell.
XX
PS Example 5; Page 70; 128pp; English.
XX
CC The present invention describes a method for regulating production of a
CC product in a cell. The method comprises inserting a regulatable
CC catalytically active nucleic acid (RCANA) into a gene that produces the
CC product or regulates the production of the product in the cell, where the
CC RCANA comprises a catalytic domain which modifies a transcript to alter
CC its coding potential and a regulatory domain that recognises an effector
CC that alters the function of the catalytic domain, and contacting the
CC regulatory domain with an effector to regulate production of the product.
CC Also described: (1) regulating a biological pathway in cell; and (2)
CC screening a population of cells for a cell that produces a bioproduct.
CC The methods are useful for regulating a biological pathway in cell, or
CC regulating production of a product in a cell. The RCANAs are useful as
CC regulatory elements to control the expression of genes in a metabolic
CC pathway, or as regulated selectable markers to increase a selective
CC pressure favouring or disfavouring production of a targeted bioproduct.
CC The RCANAs are also useful for in vitro or in vivo sensing or detection,
CC and in gene therapy. The present sequence represents an oligonucleotide
CC used in the construction of an RCANA, which is used in an example from
CC the present invention.
XX
SQ Sequence 94 BP; 27 A; 23 C; 17 G; 27 T; 0 U; 0 Other;

Query Match 10.4%; Score 13.6; DB 1; Length 94;
Best Local Similarity 80.0%; Pred. No. 30;
Matches 16; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 6 AGTATAAGGTGACTTATACT 25
|||||||| ||||||||
Db 25 AGTATAAGTCACCTTATACT 6

RESULT 36
ADQ96955/c
ID ADQ96955 standard; DNA; 94 BP.
XX
AC ADQ96955;
XX
DT 23-SEP-2004 (first entry)
XX
DE RCANA GPITH1P6 mutagenic oligonucleotide B11.
XX
KW RCANA; catalytically active regulatable nucleic acid; ss; ribozyme;
KW aptamer; effector domain; nucleic acid catalyst domain; gene therapy;
KW industrial biosynthesis; bioremediation; bacteriophage T4;
KW thymidylate synthase; self-splicing intron.
XX
OS Enterobacteria phage T4.
OS Synthetic.
XX
PN US2004126882-A1.
XX
PD 01-JUL-2004.
XX
PF 24-SEP-2002; 2002US-00254568.
XX
PR 15-JUN-2000; 2000US-0212097P.
PR 14-SEP-2000; 2000US-00661658.
PR 20-SEP-2000; 2000US-00666870.
PR 14-JUN-2001; 2001US-00883119.
PR 24-SEP-2001; 2001US-0324715P.
XX
PA (ELLI/) ELLINGTON A D.
PA (HESS/) HESSELBERTH J.
PA (THOM/) THOMPSON K.
PA (ROBE/) ROBERTSON M P.
PA (SOOT/) SOOTER L.
PA (DAVI/) DAVIDSON E.
PA (COXJ/) COX J C.
PA (RIED/) RIEDEL T.
PA (WILS/) WILSON C.
PA (CLOA/) CLOAD S T.
PA (KEEF/) KEEFE A D.
XX
PI Ellington AD, Hesselberth J, Thompson K, Robertson MP, Sooter L;
PI Davidson E, Cox JC, Riedel T, Wilson C, Cload ST, Keefe AD;
XX
DR WPI; 2004-560517/54.
XX
PT Novel regulatable, catalytically active nucleic acid comprising effector
PT domain, and catalyst domain which comprises randomized catalytic residues
PT and is regulated by effector that interacts with effector domain.
XX
PS Example 5; SEQ ID NO 20; 78pp; English.
XX
CC The invention relates to a regulatable, catalytically active nucleic acid
CC (RCANA) segment comprising an effector domain and a nucleic acid catalyst
CC domain in which one or more critical catalytic residues of the nucleic
CC acid catalyst have been randomised, where the kinetic parameters of the
CC catalytic domain are regulated by an effector that interacts with the
CC effector domain. Also included are a nucleic acid comprising a gene, a
CC RCANA inserted within the gene (where the presence of an effector causes
CC the nucleic acid to catalyse a reaction), isolating an RCANA (comprising
CC a catalytic and an effector domain involving randomising at least one
CC nucleotide in the catalytic domain of a catalytically active nucleic acid
CC to create a nucleic acid pool, removing from the nucleic acid pool those
CC nucleic acids that interact with the catalytic target of the catalytic
CC domain, adding an effector molecule to the nucleic acids and isolating
CC those nucleic acids that interact with the catalytic target of the
CC catalytic domain), detection of a target using a RCANA, modifying a
CC target using a RCANA (involving providing a RCANA capable of target-
CC specific modification and modifying the target under conditions that
CC cause a RCANA-specific activity), selecting an RCANA and detecting an
CC RCANA (involving isolating an RCANA, creating a construct in which the
CC nucleic acid is in position to regulate the expression of a reporter
CC gene, introducing the construct into a host cell and measuring the
CC catalytic activity of the nucleic acid upon exposure of the host cell to
CC the effector. The RCANA is useful for regulating production of a product
CC in a cell (by gene therapy) which involves inserting into a gene that
CC produces the product or regulates the production of the product in the
CC cell an RCANA which comprises a catalytic domain, that modifies a
CC transcript to alter its coding potential, and a regulatory domain which
CC recognises an effector that alters the function of the catalytic domain,
CC contacting the regulatory domain with an effector thereby regulating
CC production of the product. The concentration of the effector modulates
CC the activity of the catalytic domain of the RCANA. The production of the
CC product is fully inhibited or is increased compared to a normal control
CC level, or is partially inhibited according to the concentration of the
CC effector. The RCANA blocks or activates expression of the gene. The
CC effector is the product, where it accesses feedback inhibitor of the
CC gene. The product is produced in a metabolic pathway that is being
CC regulated, and the effector or the product is an intermediate in a
CC metabolic pathway. The effector is endogenous or exogenous to the cell.
CC The effector is an end product of a biosynthetic process. The effector or
CC the product is chosen from protein, enzyme, protein pharmaceutical,
CC metabolite, drug, dye, vitamin, food additive, chemical additive,
CC pesticide, insecticide, feed compound, and a waste product. The drug is

```
CC   chosen from antibiotics, anticancer drugs, antifungals, cholesterol-
CC   lowering drugs, and immunosuppressants. The RCANA is useful for
CC   regulating a biological pathway in a cell, for screening a population of
CC   cells for a cell that produces a bioproduct, for modulating expression of
CC   a nucleic acid, in gene therapy applications, and for facilitating
CC   industrial biosynthesis and bioremediation. The present sequence is an
CC   oligonucleotide used to mutate the catalytic region of an RCANA based on
CC   the bacteriophage T4 thymidylate synthase gene self-splicing intron.
XX
SQ   Sequence 94 BP; 27 A; 23 C; 17 G; 27 T; 0 U; 0 Other;

  Query Match             10.4%;  Score 13.6;  DB 1;  Length 94;
  Best Local Similarity   80.0%;  Pred. No. 30;
  Matches   16;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy          6 AGTATAAGGTGACTTATACT 25
              ||||||||    ||||||||
Db         25 AGTATAAGTCACCTTATACT 6


RESULT 37
ABN83053/c
ID   ABN83053 standard; RNA; 82 BP.
XX
AC   ABN83053;
XX
DT   16-AUG-2002  (first entry)
XX
DE   Group I P6 aptazyme pool.
XX
KW   Aptazyme; regulatable; aptamer; luciferase; cyclic AMP; ss;
KW   group I ribozyme; anti-theophylline; aptazyme pool.
XX
OS   Unidentified.
XX
FH   Key             Location/Qualifiers
FT   misc_binding    4. .9
FT                   /*tag=  a
FT                   /bound_moiety= "Bases 33-28"
FT   stem_loop       14. .24
FT                   /*tag=  b
FT   misc_binding    28. .33
FT                   /*tag=  a
FT                   /bound_moiety= "Bases 9-4"
FT   misc_binding    34. .35
FT                   /*tag=  c
FT                   /bound_moiety= "Bases 79-78"
FT   misc_feature    41
FT                   /*tag=  d
FT                   /note= "Base may be repeated 1-4 times"
FT   misc_binding    45. .46
FT                   /*tag=  e
FT                   /bound_moiety= "Bases 68-67"
FT   stem_loop       48. .62
FT                   /*tag=  f
FT   misc_binding    67. .68
FT                   /*tag=  g
FT                   /bound_moiety= "Bases 46-45"
FT   misc_feature    72
FT                   /*tag=  h
FT                   /bound_moiety= "Base may be repeated 1-4 times"
FT   misc_binding    78. .79
FT                   /*tag=  i
FT                   /bound_moiety= "Bases 35-34"
XX
PN   WO200196541-A2.
XX
PD   20-DEC-2001.
XX
PF   15-JUN-2001; 2001WO-US019119.
XX
PR   15-JUN-2000; 2000US-00661658.
XX
PA   (TEXA ) UNIV TEXAS.
XX
PI   Ellington AD,  Hesselberth J,  Marshall K,  Robertson M,  Sooter L;
PI   Davidson E,  Cox JC,  Reidel T;
XX
DR   WPI; 2002-090203/12.
XX
PT   Aptazyme construct for detecting the presence of ligands, comprises a
PT   regulatable Group I intron aptamer oligonucleotide with a regulatory
PT   domain, and modulates their kinetic parameters in response to an
PT   effector.
XX
PS   Example 2; Fig 3; 42pp; English.
XX
CC   The sequence represents a portion of the P6 region of the Group I
CC   ribozyme joined to the anti-theophylline aptamer by a short randomised
CC   region to generate a pool of aptazymes of the presents invention. The
CC   invention relates to a novel aptazyme construct comprising a regulatable
CC   Group I intron aptamer oligonucleotide sequence having an allosterically
CC   regulatable regulatory domain, where the kinetic parameters of the
CC   aptazyme on a target gene vary in response to the interaction of an
CC   allosteric effector molecule with the regulatory domain, and the intron
CC   splicing reaction occurs in vitro. The aptazyme is useful: (1) in assays
CC   to detect the presence of ligands or to detect activation of an aptazyme
CC   by an effector; (2) in the identification, isolation and enhancement of
CC   allosteric effectors and of the allosterically regulatable aptazymes with
CC   which they interact; (3) to activate or repress a reporter gene (e.g.
CC   luciferase) containing an engineered intron in response to an endogenous
CC   activator; and (4) to monitor intracellular levels of proteins or small
CC   molecules such as cyclic AMP
XX
SQ   Sequence 82 BP; 23 A; 21 C; 16 G; 0 T; 20 U; 2 Other;

  Query Match             10.1%;  Score 13.2;  DB 1;  Length 82;
  Best Local Similarity   60.0%;  Pred. No. 34;
  Matches   21;  Conservative    0;  Mismatches   14;  Indels    0;  Gaps    0;

Qy         58 AGACAATCCCGTGCTAAATTATACCAGCATCGTCT 92
              |||| || | |   | | |||   | | || ||||
Db         56 AGACGATGCTGGTATNATTTAGCACGGGATTGTCT 22


RESULT 38
AAS56827
ID   AAS56827 standard; DNA; 16 BP.
XX
AC   AAS56827;
XX
DT   16-JAN-2002  (first entry)
XX
DE   Validation ribozyme DNA sequence #1.
XX
KW   Human; BRCA-1 regulator; ribozyme; BR1; RNA target recognition; probe;
KW   cytostatic; RNA cleavage; tumour suppressor; PCR primer; CHLR2; AF6; BR2;
KW   inhibitor dominant negative 4; breast basic conserved protein 1; BBC1;
KW   BR3; ID4; cancer; proliferative disorder; tumour proliferation; ss.
XX
OS   Homo sapiens.
XX
PN   WO200170982-A2.
XX
PD   27-SEP-2001.
XX
PF   23-MAR-2001; 2001WO-US009559.
XX
PR   23-MAR-2000; 2000US-00536058.
XX
PA   (IMMU-) IMMUSOL INC.
PA   (BEGE/) BEGER C.
XX
PI   Beger C,  Barber J,  Wong-Staal F;
XX
DR   WPI; 2001-611503/70.
```

XX
PT Novel polypeptides that are the regulators of BRCA-1, useful for treating
PT cancer and diagnosing the presence of neoplastic cells in biological
PT sample.
XX
PS Disclosure; Fig 8; 97pp; English.
XX
CC Sequences AAS56729-AAS56968 represent DNA encoding BRCA-1 regulators,
CC ribozyme target recognition RNA sequences, DNA fragments encoding the RNA
CC and primers used in the methods of the invention. Hybridisation of
CC ribozymes to their targets results in cleavage of the RNA target. The
CC ribozymes can be used to cleave regulators of the tumour suppressor BRCA-
CC 1, resulting in upregulation or downregulation of BRCA-1 in a cell. The
CC mRNA targets include those encoding the BRCA-1 regulator BR1, inhibitor
CC dominant negative 4 (ID4), breast basic conserved protein 1 (BBC1),
CC CHLR2, AF6, BR2 and BR3. Regulation of BRCA-1 is useful for treating and
CC diagnosing cancer and other proliferative disorders. The severity of an
CC incidence of cancer can be lessened by regulating tumour proliferation
CC through modulation of BRCA-1 expression. The sequences of the invention
CC are useful in the development of anti-cancer drugs
XX
SQ Sequence 16 BP; 3 A; 4 C; 5 G; 4 T; 0 U; 0 Other;

Query Match 9.8%; Score 12.8; DB 1; Length 16;
Best Local Similarity 87.5%; Pred. No. 82;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 84 GCATCGTCTTGATGCC 99
|||| ||||||| |||
Db 1 GCATGGTCTTGAAGCC 16

RESULT 39
ABT35681/c
ID ABT35681 standard; DNA; 17 BP.
XX
AC ABT35681;
XX
DT 12-JUN-2003 (first entry)
XX
DE Tumour suppression related human fukutin oligo SEQ ID No 1318.
XX
KW Cytostatic; virucide; neuroprotective; nootropic; neuroleptic; gene chip;
KW antisense; sense; tumour; cell degeneration; cancer; Alzheimer's disease;
KW schizophrenia; protein chip; gene therapy; tumour suppression;
KW human fukutin; ds.
XX
OS Homo sapiens.
XX
PN WO2003025175-A2.
XX
PD 27-MAR-2003.
XX
PF 17-SEP-2002; 2002WO-IB004208.
XX
PR 17-SEP-2001; 2001FR-00011978.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-313353/30.
XX
PT New isolated nucleic acid, useful for treating viral diseases associated
PT with tumors and cell degeneration, also related polypeptides, antibodies
PT and transfected cells.
XX
PS Disclosure; Page 187; 720pp; French.
XX
CC The invention relates to a novel isolated 17 mer nucleic acid sequence,
CC given in the specification, a sequence containing at least 15 consecutive
CC nucleotides from the 17 mer sequence, a sequence with, after optimal
CC alignment, at least 80 % identity to the 17 mer sequence, a sequence that
CC hybridizes to them under highly stringent conditions, or the complement
CC of any of them, or the corresponding RNA. The novel isolated nucleic
CC acids of the invention are useful as probes and primers for detecting,
CC identifying, quantifying and/or amplifying a nucleic acid, e.g. as one
CC component of a gene chip, in vitro as (anti)sense reagents, and for
CC production of recombinant polypeptides. Any of the nucleic acids,
CC polypeptides, vectors containing the nucleic acids, cells containing the
CC vector or antibodies directed against the polypeptides are useful for
CC preparation of pharmaceuticals for prevention and/or treatment of viral
CC diseases that are characterised by development of tumours or cell
CC degeneration, specifically cancer but also Alzheimer's disease and
CC schizophrenia. Analysis of the expression of the 17 mer nucleic acids in
CC patient samples is useful for diagnosis and/or prognosis of these
CC diseases. The polypeptides can also be used to generate antibodies, and
CC both the polypeptide and antibodies are useful as components of protein
CC chips. The nucleic acid sequences of the invention can be used in gene
CC therapy. This polynucleotide sequence represents a tumour suppression
CC related human fukutin oligonucleotide of the invention
XX
SQ Sequence 17 BP; 5 A; 6 C; 3 G; 3 T; 0 U; 0 Other;

Query Match 9.8%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 80;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 94 GATGCCCTTGGCAGAT 109
|||| ||||||||||
Db 17 GATGGTCTTGGCAGAT 2

RESULT 40
ACC80518/c
ID ACC80518 standard; DNA; 17 BP.
XX
AC ACC80518;
XX
DT 25-JUL-2003 (first entry)
XX
DE m2CRE2 EMSA probe for protein binding to mouse UCP1 enhancer region.
XX
KW Mouse; UCP1; ds; anorectic; expression modulator; thermogenesis;
KW brown adipose tissue; obesity; weight disorder; enhancer; probe;
KW mitochondrial uncoupling factor; nuclear factor erythroid 2.
XX
OS Synthetic.
XX
PN WO2003026576-A2.
XX
PD 03-APR-2003.
XX
PF 24-SEP-2002; 2002WO-US030266.
XX
PR 24-SEP-2001; 2001US-0324400P.
XX
PA (LOUU) UNIV LOUISIANA STATE & AGRIC & MECH COLL.
XX
PI Kozak LP, Rim JS;
XX
DR WPI; 2003-354624/33.
XX
PT Ameliorating or preventing in mammals, symptoms of a disease treatable by
PT increasing uncoupling protein 1 (Ucp1) expression, by administering a
PT compound that causes an increase in concentration of NFE212 protein, to
PT the mammal.
XX
PS Example 2; Page 17; 57pp; English.
XX
CC The invention relates to the treatment of e.g a weight disorder such as
CC obesity, by increasing thermogenesis in brown adipose tissue (BAT). The
CC method involves increasing the expression of the BAT gene, mitochondrial
CC uncoupling protein 1 (UCP1), especially by contacting the regulatory
CC region of the gene with the nuclear factor erythroid 2 (NF-E2)
CC transcription factor. This sequence represents an electrophoretic

CC mobility shift assay (EMSA) probe used in a competitive binding assay to
CC identify which sequences in the mouse UCP1 gene enhancer region
CC (ACC80501) are used to bind CREB protein. The treatment involved
CC modulation of Nfe212 gene expression, an increase in Ucp1 expression
CC leading to an enhancement of growth and differentiation of brown adipose
CC tissue. The treatment is useful for ameliorating or preventing the
CC symptoms of a disease treatable by increasing Ucp1 expression, in
CC mammals, e.g. weight disorder which can be ameliorated or prevented with
CC an increase in brown adipose tissue thermogenesis such as obesity
XX
SQ Sequence 17 BP; 5 A; 4 C; 2 G; 6 T; 0 U; 0 Other;

Query Match 9.8%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 80;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 11 AAGGTGACTTATACTT 26
||||||||| ||| ||
Db 16 AAGGTGACTCATAGTT 1

RESULT 41
ADB41555/c
ID ADB41555 standard; DNA; 17 BP.
XX
AC ADB41555;
XX
DT 18-DEC-2003 (revised)
DT 04-DEC-2003 (first entry)
XX
DE Tumour suppression/reversion associated nucleotide #1878.
XX
KW cytostatic; antiviral; neuroprotective; nootropic; neuroleptic; ss;
KW primer; probe; tumour suppression; tumour reversion; apoptosis;
KW virus resistance; transgenic animals; Alzheimer's disease; schizophrenia;
KW diagnosis.
XX
OS Homo sapiens.
XX
PN WO2003040369-A2.
XX
PD 15-MAY-2003.
XX
PF 17-SEP-2002; 2002WO-IB004219.
XX
PR 17-SEP-2001; 2001FR-00011981.
XX
PA (MOLE-) MOLECULAR ENGINES LAB.
XX
PI Telerman A, Amson R, Tuijnder M;
XX
DR WPI; 2003-441574/41.
XX
PT New nucleic acid encoding human prostate membrane-specific antigen,
PT useful e.g. for treatment of tumors and viral infection, also related
PT polypeptide and antibodies.
XX
PS Disclosure; Page 251; 771pp; French.
XX
CC The invention relates to the isolation of 6327 nucleotide sequences,
CC fragments of at least 15 consecutive nucleotides of these nucleotides, a
CC sequence having at least 80% identity, after optimal alignment, with the
CC nucleotides, a sequence that hybridizes under stringent conditions with
CC the nucleotides, or the complement, or corresponding RNA, of the
CC nucleotides. The nucleotides are used as probes or primers for detecting,
CC identifying, quantifying and/or amplifying nucleic acids, as in vitro
CC sense and antisense sequences, of nucleotides involved in tumour
CC suppression or reversion, apoptosis and or viral resistance, to produce
CC recombinant polypeptides, and to prepare transgenic animals, as
CC experimental models. The nucleotides (also vectors containing them and
CC cells containing the vectors), the encoded polypeptides and antibodies
CC (Ab) against the polypeptide are useful for prevention and/or treatment
CC of viral infections or diseases characterized by development of tumours
CC or cell degeneration (e.g. Alzheimer's disease or schizophrenia).
CC Analysis of the expression of the nucleotides can be used for diagnosis
CC and/or prognosis of these diseases. The nucleotides and polypeptides can
CC also be used to screen for their specific interactive molecules,
CC potentially useful for treating diseases associated with abnormal
CC expression of the nucleotides.
XX
SQ Sequence 17 BP; 5 A; 5 C; 4 G; 3 T; 0 U; 0 Other;

Query Match 9.8%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 80;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 81 CCAGCATCGTCTTGAT 96
|||| || ||||||||
Db 17 CCAGGATGGTCTTGAT 2

RESULT 42
ADD42040
ID ADD42040 standard; DNA; 17 BP.
XX
AC ADD42040;
XX
DT 15-JAN-2004 (first entry)
XX
DE Rice acetolactate synthase related oligonucleotide 3-1-1 SEQ ID NO:21.
XX
KW ss; rice; acetolactate synthase; ALS; pyrimidinyl carboxy herbicide;
KW herbicide-resistance; herbicide.
XX
OS Synthetic.
XX
PN WO2003083118-A1.
XX
PD 09-OCT-2003.
XX
PF 21-FEB-2003; 2003WO-JP001917.
XX
PR 29-MAR-2002; 2002JP-00095721.
XX
PA (TSUB) KUMIAI CHEM IND CO LTD.
PA (NAAG-) NAT INST AGROBIOLOGICAL SCI.
XX
PI Kaku K, Shimizu T, Kawai K, Nagayama K, Fukuda A, Tanaka Y;
XX
DR WPI; 2003-902935/82.
XX
PT Genes of rice origin encoding pyrimidinyl carboxy herbicide resistant
PT acetolactate synthase for production of herbicide resistant strains or
PT rice and other plants.
XX
PS Example 4; SEQ ID NO 21; 96pp; Japanese.
XX
CC The invention relates to novel mutant forms of the rice acetolactate
CC synthase (ALS) gene encoding ALS resistant to pyrimidinyl carboxy
CC herbicides. Plants which may be transformed with the mutant gene include
CC rice, and also maize, barley, wheat, soya, cotton and tobacco. The mutant
CC gene may be useful in the production of herbicide-resistant plants which
CC can be cultivated in the presence of the herbicide. The present sequence
CC is used in the exemplification of the invention.
XX
SQ Sequence 17 BP; 2 A; 4 C; 5 G; 6 T; 0 U; 0 Other;

Query Match 9.8%; Score 12.8; DB 1; Length 17;
Best Local Similarity 87.5%; Pred. No. 80;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 84 GCATCGTCTTGATGCC 99
||||| |||||||| |
Db 1 GCATCTTCTTGATGGC 16

```
RESULT 43
ADI49919
ID   ADI49919 standard; DNA; 17 BP.
XX
AC   ADI49919;
XX
DT   15-APR-2004  (first entry)
XX
DE   Human tumour suppression/reversion-related DNA sequence SeqID2422.
XX
KW   tumour suppression; tumour reversion; apoptosis; virus resistance;
KW   cytostatic; virucide; neuroprotective; nootropic; neuroleptic; probe;
KW   primer; PCR; gene chip; antisense; viral disease; tumour;
KW   cell degeneration; cancer; Alzheimer's disease; schizophrenia; ds; human.
XX
OS   Homo sapiens.
XX
PN   WO2003025177-A2.
XX
PD   27-MAR-2003.
XX
PF   17-SEP-2002; 2002WO-IB004523.
XX
PR   17-SEP-2001; 2001FR-00011980.
XX
PA   (MOLE-) MOLECULAR ENGINES LAB.
XX
PI   Telerman A,  Amson R,  Tuijnder M;
XX
DR   WPI; 2003-313354/30.
XX
PT   New isolated nucleic acid, useful for treating viral diseases associated
PT   with tumors and cell degeneration, also related polypeptides, antibodies
PT   and transfected cells.
XX
PS   Disclosure; SEQ ID NO 2422; 30pp; French.
XX
CC   This invention relates to novel isolated nucleic acid sequences involved
CC   in the phenomena of tumour suppression, tumour reversion, apoptosis
CC   and/or resistance to viruses. The invention may be useful for the
CC   development of compounds with a cytostatic, virucide, neuroprotective,
CC   nootropic or neuroleptic activity. The DNA sequences may be useful as
CC   probes and primers for detecting, indentifying, quantifying and/or
CC   amplifying nucleic acid, for example as one component of a gene chip, in
CC   vitro as antisense reagents and for production of recombinant
CC   polypeptides. The invention may therefore be useful for preparation of
CC   pharmaceuticals for prevention and/or treatment of viral diseases that
CC   are characterised by development of tumours or cell degeneration,
CC   specifically cancer but also Alzheimer's disease and schizophrenia. The
CC   present sequence is that of a nucleic acid sequence of the invention.
CC   Note: The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/publishedpct_sequences
XX
SQ   Sequence 17 BP; 2 A; 4 C; 3 G; 8 T; 0 U; 0 Other;

  Query Match             9.8%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 80;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         86 ATCGTCTTGATGCCCT 101
               ||| |||||||| |||
Db          2 ATCTTCTTGATGTCCT 17


RESULT 44
ACC53993/c
ID   ACC53993 standard; DNA; 17 BP.
XX
AC   ACC53993;
XX
DT   27-JUN-2003  (first entry)
XX
DE   Human tumour suppressor sequence #2760.
XX
KW   ss; tumour suppressor; antitumour; cytostatic; tumour suppression;
KW   tumour regression; apoptosis; virus resistance; diagnosis;
KW   cellular degeneration.
XX
OS   Homo sapiens.
XX
PN   FR2826373-A1.
XX
PD   27-DEC-2002.
XX
PF   20-JUN-2001; 2001FR-00008139.
XX
PR   20-JUN-2001; 2001FR-00008139.
XX
PA   (MOLE-) MOLECULAR ENGINES LAB SA.
XX
PI   Tuijnder M,  Telerman A,  Amson R;
XX
DR   WPI; 2003-250498/25.
XX
PT   New nucleic acid sequences associated with tumor suppression, regression,
PT   apoptosis or virus resistance are useful to diagnose and treat viral
PT   disease, development of tumor cells and cell degeneration.
XX
PS   Claim 1; Page 677; 798pp; French.
XX
CC   This sequence represents an isolated nucleic acid sequence associated
CC   with tumour suppression or regression, apoptosis or virus resistance. The
CC   invention relates to these sequences or sequences having at least 80%
CC   identity to them, and polypeptides encoded by the sequences or
CC   polypeptides having 80% identity to the polypeptide sequences. The
CC   invention is used to diagnose or treat viral disease or disease
CC   characterized by development of tumour cells or cellular degeneration
XX
SQ   Sequence 17 BP; 5 A; 6 C; 3 G; 3 T; 0 U; 0 Other;

  Query Match             9.8%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 80;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         94 GATGCCCTTGGCAGAT 109
               ||||  ||||||||||
Db         17 GATGGTCTTGGCAGAT 2


RESULT 45
ADI84100
ID   ADI84100 standard; RNA; 17 BP.
XX
AC   ADI84100;
XX
DT   03-JUN-2004  (first entry)
XX
DE   HCV DNAzyme substrate sequence #1346.
XX
KW   ss; enzymatic nucleic acid; RNA cleavage; hepatitis C virus; HCV;
KW   HCV infection; type I interferon; DNAzyme.
XX
OS   Hepatitis C virus.
XX
PN   US2003125270-A1.
XX
PD   03-JUL-2003.
XX
PF   18-DEC-2000; 2000US-00740332.
XX
PR   18-DEC-2000; 2000US-00740332.
XX
PA   (BLAT/) BLATT L.
PA   (MCSW/) MCSWIGGEN J.
PA   (ROBE/) ROBERTS E.
```

```
PA   (PAVC/) PAVCO P A.
PA   (MACE/) MACEJACK D.
XX
PI   Blatt L,  Mcswiggen J,  Roberts E,  Pavco PA,  Macejack D;
XX
DR   WPI; 2004-031273/03.
XX
PT   Enzymatic nucleic acid molecules which specifically cleave RNA derived
PT   from hepatitis C virus (HCV), useful for the treatment of HCV infections,
PT   especially in combination with type I interferon therapy.
XX
PS   Claim 1; SEQ ID NO 1346; 198pp; English.
XX
CC   The invention relates to an enzymatic nucleic acid molecule which
CC   specifically cleaves RNA derived from hepatitis C virus (HCV), in which
CC   the binding arms of the enzymatic nucleic acid molecule comprises
CC   sequences complementary to any of the defined substrate sequences given
CC   in the specification. The nucleic acid molecule may be administered for
CC   the treatment of HCV infections, especially in combination with type I
CC   interferons. The present sequence represents a HCV DNAzyme substrate
CC   sequence.
XX
SQ   Sequence 17 BP; 4 A; 6 C; 4 G; 0 T; 3 U; 0 Other;

  Query Match             9.8%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   68.8%;  Pred. No. 80;
  Matches   11;  Conservative    3;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         40 ACGGGGAACCTCTCTA 55
              || |||| ||:|:|:|
Db          1 ACAGGGAGCCUCUCUA 16


RESULT 46
AAT54644/c
ID   AAT54644 standard; RNA; 15 BP.
XX
AC   AAT54644;
XX
DT   25-MAR-2003  (revised)
DT   22-APR-1997  (first entry)
XX
DE   Mouse IL-5 hammerhead ribozyme target sequence (nt. position 975).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome; AIDS;
KW   ss.
XX
OS   Mus musculus.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB000156.
XX
PR   23-FEB-1994;   94US-00201109.
PR   29-MAR-1994;   94US-00218934.
PR   04-APR-1994;   94US-00222795.
PR   07-APR-1994;   94US-00224483.
PR   15-APR-1994;   94US-00227958.
PR   15-APR-1994;   94US-00228041.
PR   18-MAY-1994;   94US-00245736.
PR   06-JUL-1994;   94US-00271280.
PR   15-AUG-1994;   94US-00291932.
PR   16-AUG-1994;   94US-00291433.
PR   17-AUG-1994;   94US-00292620.
PR   19-AUG-1994;   94US-00293520.
PR   02-SEP-1994;   94US-00300000.
PR   08-SEP-1994;   94US-00303039.
PR   23-SEP-1994;   94US-00311486.
PR   23-SEP-1994;   94US-00311749.
PR   28-SEP-1994;   94US-00314397.
PR   03-OCT-1994;   94US-00316771.
PR   07-OCT-1994;   94US-00319492.
PR   11-OCT-1994;   94US-00321993.
PR   04-NOV-1994;   94US-00334847.
PR   10-NOV-1994;   94US-00337608.
PR   28-NOV-1994;   94US-00345516.
PR   16-DEC-1994;   94US-00357577.
PR   23-DEC-1994;   94US-00363233.
PR   30-JAN-1995;   95US-00380734.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
PI   Grimm S,  Karpeisky A,  Kisich K,  Matulic-Adamic J,  Mcswiggen JA;
PI   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D,  Thompson JD;
PI   Tracz D,  Usman N,  Wincott FE,  Woolf T;
XX
DR   WPI; 1995-351090/45.
XX
PT   Ribozymes having modified bases and methods for producing them - for use
PT   in inhibiting disease related genes.
XX
PS   Claim 2; Page 221; 407pp; English.
XX
CC   The present sequence represents a preferred target sequence for an
CC   enzymatic nucleic acid (i.e. a ribozyme) which cleaves interleukin-5 (IL-
CC   5) mRNA at the nucleotide base position indicated in the DE line. Regions
CC   of the mRNA that do not form secondary folding structures and that
CC   contain potential hammerhead and hairpin ribozyme cleavage sites were
CC   identified by computer analysis. Ribozymes directed against these mRNA
CC   sequences were designed and synthesised with modifications that improve
CC   their nuclease resistance. The ribozymes cleave the IL-5 target sequences
CC   and thereby inhibit IL-5 expression, making them useful for treating
CC   chronic asthma, e.g. by inhibiting the synthesis of IL-5 in lymphocytes
CC   and preventing the recruitment and activation of eosinophils. The
CC   ribozymes can also be used to treat eosinophilia (related to parasitic
CC   infection or with pulmonary infiltration) and L-tryptophan-associated
CC   eosinophilia-myalgia syndrome. (Updated on 25-MAR-2003 to correct PI
CC   field.)
XX
SQ   Sequence 15 BP; 4 A; 4 C; 3 G; 0 T; 4 U; 0 Other;

  Query Match             9.5%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 91;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         31 TCTATCTAAACGGG 44
              ||||||||||  |||
Db         15 TCTATCTAAAGGGG 2


RESULT 47
ABH36274/c
ID   ABH36274 standard; DNA; 13 BP.
XX
AC   ABH36274;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 236251 for detecting SNP TSC0057662.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
```

OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 236251; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 2 A; 1 C; 6 G; 4 T; 0 U; 0 Other;

Query Match 9.2%; Score 12; DB 1; Length 13;
Best Local Similarity 100.0%; Pred. No. 1e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 118 AACGACTATCCC 129
||||||||||||
Db 12 AACGACTATCCC 1

RESULT 48
ABH36275
ID ABH36275 standard; DNA; 13 BP.
XX
AC ABH36275;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 236252 for detecting SNP TSC0057662.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 236252; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 4 A; 6 C; 1 G; 2 T; 0 U; 0 Other;

Query Match 9.2%; Score 12; DB 1; Length 13;
Best Local Similarity 100.0%; Pred. No. 1e+02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 118 AACGACTATCCC 129
||||||||||||
Db 2 AACGACTATCCC 13

RESULT 49
ABI99108
ID ABI99108 standard; DNA; 15 BP.
XX
AC ABI99108;
XX
DT 27-FEB-2002 (first entry)
XX
DE Human PCDH2 ASO PCR primer SEQ ID NO 65.
XX
KW Human; PCDH2; protocadherin 2; haplotyping; polymorphic variant; SNP;
KW single nucleotide polymorphism; cytostatic; cancer; chromosome 5q31;
KW allele-specific oligonucleotide; ASO; PCR primer; ss.
XX
OS Homo sapiens.
XX
PN WO200194361-A2.
XX
PD 13-DEC-2001.
XX
PF 06-JUN-2001; 2001WO-US018321.
XX
PR 06-JUN-2000; 2000US-0209564P.
XX
PA (GENA-) GENAISSANCE PHARM INC.
XX
PI Kliem SE, Koshy B, Tanguay DA;
XX
DR WPI; 2002-097928/13.
XX
PT New protocadherin 2 (PCDH2) polymorphic variants and encoding genes,
PT useful in expressing PCDH2 protein for screening candidate drugs to treat
PT diseases related to PCDH2 activity.
XX
PS Claim 16; Page 14; 127pp; English.
XX
CC The invention relates to haplotyping the protocadherin 2 (PCDH2) gene,
CC comprising determining which of the haplotypes given in the specification
CC defines one or both copies of the individual's pCDH2 gene. The
CC polymorphisms are within a 30244 base pair sequence (ABA05413), fully

```
CC   defined in the specification. The polymorphic variants are useful in
CC   studying the expression and function of PCDH2, in expressing PCDH2
CC   protein for use in screening for candidate drugs to treat diseases such
CC   as cancer, related to PCDH2 activity, in studying the effect of the
CC   variation on the biological activity of PCDH2 and the binding affinity of
CC   candidate drugs targeting PCDH2. The haplotyping methods are useful in
CC   validating PCDH2 as a candidate target for treating a specific condition
CC   or disease predicted to be associated with PCDH2 activity or in the
CC   design of clinical trials of candidate drugs for treating a specific
CC   condition or disease associated with PCDH2 activity. The present sequence
CC   is that of a PCDH2 allele-specific oligonucleotide (ASO) PCR primer of
CC   the invention
XX
SQ   Sequence 15 BP; 2 A; 5 C; 2 G; 5 T; 0 U; 1 Other;

  Query Match             9.2%;  Score 12;  DB 1;  Length 15;
  Best Local Similarity   85.7%;  Pred. No. 98;
  Matches   12;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         90 TCTTGATGCCCTTG 103
              || |||||||||||:
Db          1 TCATGATGCCCTTS 14


RESULT 50
AAX31622
ID   AAX31622 standard; DNA; 15 BP.
XX
AC   AAX31622;
XX
DT   21-MAY-1999  (first entry)
XX
DE   Tag sequence of a transcript increased in pancreatic cancer.
XX
KW   Tag sequence; colorectal cancer; pancreatic cancer; colon cancer;
KW   diagnosis; prognosis; treatment; ss.
XX
OS   Homo sapiens.
XX
PN   WO9853319-A2.
XX
PD   26-NOV-1998.
XX
PF   20-MAY-1998;   98WO-US010277.
XX
PR   21-MAY-1997;   97US-0047352P.
XX
PA   (UYJO ) UNIV JOHNS HOPKINS.
XX
PI   Vogelstein B,  Kinzler KW;
XX
DR   WPI; 1999-070161/06.
XX
PT   Use of isolated gene transcripts - useful for developing products for the
PT   diagnosis, prognosis and treatment of cancers, particularly colon and
PT   pancreatic cancer.
XX
PS   Claim 13; Page 65; 120pp; English.
XX
CC   AAX30947-31815 represent tag sequences of transcripts that are
CC   differentially expressed in colorectal cancer, in pancreatic cancer, or
CC   in both. The tag sequences can be used to identify genes by matching the
CC   tag to a gen data base member, or by using the tag sequences as probes to
CC   isolate unidentified genes from cDNA libraries. The tag sequences can
CC   also be used in a method for diagnosing colon or pancreatic cancer in a
CC   sample suspected of being neoplastic. The method comprises comparing the
CC   level of at least one transcript in a first sample of a tissue to a
CC   second sample, where the first sample is a colonic tissue suspected of
CC   being neoplastic and the second sample is a normal human colonic tissue.
CC   The transcript is identified by a tag selected from AAX30947-31815. The
CC   methods of the invention can be used in the diagnosis, prognosis and
CC   treatment of cancer
XX
SQ   Sequence 15 BP; 3 A; 4 C; 4 G; 4 T; 0 U; 0 Other;

  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 1e+02;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         85 CATCGTCTTGATGCC 99
              ||| ||||||| |||
Db          1 CATGGTCTTGAAGCC 15


RESULT 51
AAZ62880/c
ID   AAZ62880 standard; RNA; 15 BP.
XX
AC   AAZ62880;
XX
DT   28-MAR-2000  (first entry)
XX
DE   Substrate for HH ribozyme HCV-9353 which cleaves HCV RNA at nt. 9353.
XX
KW   Enzymatic nucleic acid; hammerhead ribozyme; virus replication; cleavage;
KW   cirrhosis; liver failure; hepatocellular carcinoma; interferon; cancer;
KW   autoimmune disease; ss.
XX
OS   Hepatitis C virus.
XX
PN   WO9955847-A2.
XX
PD   04-NOV-1999.
XX
PF   26-APR-1999;   99WO-US009027.
XX
PR   27-APR-1998;   98US-0083217P.
PR   18-SEP-1998;   98US-0100842P.
PR   25-FEB-1999;   99US-00257608.
PR   23-MAR-1999;   99US-00274553.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Blatt L,  Mcswiggen JA,  Roberts E,  Pavco PA,  Macejak D;
XX
DR   WPI; 2000-062023/05.
XX
PT   Novel ribozymes for the treatment of diseases and conditions related to
PT   hepatitis C infection.
XX
PS   Claim 1; Page 66; 123pp; English.
XX
CC   The present sequence represents the preferred target sequence of an
CC   enzymatic nucleic acid, especially a hammerhead ribozyme, which cleaves
CC   the Hepatitis C virus (HCV) RNA sequence at the base position given in
CC   the descriptor line. The HCV sequence was screened for optimal ribozyme
CC   target sites using a computer folding algorithm and regions of the mRNA
CC   which did not form secondary folding structures and contained potential
CC   ribozyme cleavage sites were identified. Ribozymes were synthesised to
CC   target these sites and their activities optimised by either varying the
CC   length of the binding arms or by modification to prevent degradation by
CC   nucleases. The ribozymes of the invention inhibit gene expression and/or
CC   viral replication, and are used to treat diseases associated with
CC   Hepatitis C virus (HCV) infection, e.g. cirrhosis, liver failure and
CC   hepatocellular carcinoma. The ribozymes may be used in combination with
CC   interferon to treat HCV infection, other infectious diseases, autoimmune
CC   diseases, and cancer
XX
SQ   Sequence 15 BP; 3 A; 5 C; 3 G; 0 T; 4 U; 0 Other;

  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 1e+02;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        104 GCAGATAAATGCCTA 118
              |||| || |||||||
```

```
Db         15 GCAGGTAGATGCCTA 1


RESULT 52
AAF47620/c
ID   AAF47620 standard; DNA; 15 BP.
XX
AC   AAF47620;
XX
DT   30-MAR-2001  (first entry)
XX
DE   IGFBP3 oligonucleotide #1040.
XX
KW   Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic;
KW   cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid;
KW   skin disorder; Insulin-like Growth Factor 1 receptor; IGF-1; pityriasis;
KW   IGF binding protein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris;
KW   growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba;
KW   keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease;
KW   hyperneovascular condition; hyperplasia; kidney disease;
KW   neovascular condition of the retina; ss.
XX
OS   Homo sapiens.
XX
PN   WO200078341-A1.
XX
PD   28-DEC-2000.
XX
PF   21-JUN-2000; 2000WO-AU000693.
XX
PR   21-JUN-1999;   99US-0140345P.
XX
PA   (MURD-) MURDOCH CHILDRENS RES INST.
XX
PI   Wraight CJ,  Werther GA,  Edmondson SR;
XX
DR   WPI; 2001-041421/05.
XX
PT   Ameliorating the effects of a disorder, e.g. psoriasis, by administering
PT   UV (ultra-violet) treatment (optional) and an antisense nucleic acid that
PT   inhibits or reduces growth factor mediated cell proliferation and/or
PT   inflammation.
XX
PS   Example 7; Page 50; 201pp; English.
XX
CC   The present invention relates to a method for ameliorating the effects of
CC   skin disorders. The method comprises contacting the skin with an
CC   antisense oligonucleotide, (for Insulin-like Growth Factor [IGF]-1
CC   receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of
CC   inhibiting or reducing growth factor mediated cell proliferation,
CC   inflammation and/or other disorders. The present sequence is an
CC   oligonucleotide which can be used to design the antisense
CC   oligonucleotides of the present invention (see AAF45151 and AAF45153-
CC   F45161). The method is useful for ameliorating the effects of psoriasis,
CC   ichthyosis, pityriasis, ruba, pilaris, serborrhoea, keloids, keratosis,
CC   neoplasias, scleroderma, warts, benign growths, cancers of the skin, a
CC   hyperneovascular condition such as a neovascular condition of the retina,
CC   brain or skin, growth factor-mediated malignancies, other sclerotic
CC   disease, kidney disease, hyperproliferation of the inside of blood
CC   vessels or any other hyperplasia
XX
SQ   Sequence 15 BP; 5 A; 4 C; 4 G; 2 T; 0 U; 0 Other;

  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 1e+02;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         93 TGATGCCCTTGGCAG 107
              | ||| |||||||||
Db         15 TCATGTCCTTGGCAG 1


RESULT 53
ABK32576
ID   ABK32576 standard; DNA; 15 BP.
XX
AC   ABK32576;
XX
DT   23-APR-2002  (first entry)
XX
DE   Human pancreatic cancer SAGE tag #128.
XX
KW   Human; colon cancer; colorectal cancer; pancreatic cancer; SAGE tag;
KW   serial analysis of gene expression; diagnostic; prognostic; probe;
KW   cancer marker; ss.
XX
OS   Homo sapiens.
XX
PN   US6333152-B1.
XX
PD   25-DEC-2001.
XX
PF   20-MAY-1998;   98US-00081646.
XX
PR   20-MAY-1998;   98US-00081646.
XX
PA   (UYJO ) UNIV JOHNS HOPKINS.
XX
PI   Vogelstein B,  Kinzler KW,  Zhang L,  Zhou W;
XX
DR   WPI; 2002-153821/20.
XX
PT   New human nucleic acid containing specific SAGE tags, useful as
PT   diagnostic markers for cancer, also derived probes.
XX
PS   Disclosure; Col 77; 161pp; English.
XX
CC   The invention relates to an isolated, purified human nucleic acid (I)
CC   that has the same sequence as a mRNA found in humans and is a SAGE
CC   (serial analysis of gene expression) tag comprising a single stranded
CC   probe containing at least 10 consecutive nucleotides. SAGE tags, are
CC   diagnostic and prognostic markers of cancer, especially of the colon and
CC   pancreas. ABK31900-ABK32770 represent human colon and pancreatic cancer
CC   SAGE tags of the invention
XX
SQ   Sequence 15 BP; 3 A; 4 C; 4 G; 4 T; 0 U; 0 Other;

  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 1e+02;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         85 CATCGTCTTGATGCC 99
              ||| ||||||| |||
Db          1 CATGGTCTTGAAGCC 15


RESULT 54
ABX00731/c
ID   ABX00731 standard; RNA; 15 BP.
XX
AC   ABX00731;
XX
DT   23-DEC-2002  (first entry)
XX
DE   Hepatitis C virus substrate #513 for HCV hammerhead ribozyme #513.
XX
KW   Enzymatic nucleic acid; RNA cleavage; Hepatitis C virus infection;
KW   HCV ribozyme; HCV expression; HCV replication; cirrhosis; virucide;
KW   liver failure; hepatocellular carcinoma; HCV infection; drug therapy;
KW   type I interferon; interferon alpha; interferon beta; cytostatic;
KW   interferon gamma; consensus interferon; hepatotropic; antiinflammatory;
KW   substrate; hammerhead ribozyme; HH ribozyme; ss.
XX
OS   Hepatitis C virus.
XX
PN   US2002082225-A1.
```

XX
PD 27-JUN-2002.
XX
PF 23-MAR-1999; 99US-00274553.
XX
PR 23-MAR-1999; 99US-00274553.
XX
PA (BLAT/) BLATT L.
PA (MCSW/) MCSWIGGEN J A.
PA (ROBE/) ROBERTS B.
PA (PAVC/) PAVCO P A.
PA (MACE/) MACEJACK D.
XX
PI Blatt L, Mcswiggen JA, Roberts B, Pavco PA, Macejack D;
XX
DR WPI; 2002-617759/66.
XX
PT New ribozymes targeting RNA derived from hepatitis C virus inhibit viral
PT replication and are useful to treat hepatitis C virus infections and
PT cirrhosis, liver failure or hepatocellular carcinoma.
XX
PS Claim 1; Page 35; 80pp; English.
XX
CC The present invention relates to enzymatic nucleic acids which
CC specifically cleave RNA derived from Hepatitis C virus (HCV). The
CC enzymatic nucleic acid or ribozyme is in a hammerhead (HH) or hairpin
CC (HP) motif where the binding arms comprise sequences complementary to one
CC of the substrate sequences defined in the specification. The HCV
CC ribozymes are useful for modulating the expression and/or replication of
CC HCV. They can be used to treat cirrhosis, liver failure and/or
CC hepatocellular carcinoma. The HCV ribozymes are also useful for treating
CC a condition associated with HCV infection in conjunction with one or more
CC other drug therapies, particularly type I interferon, especially
CC interferon alpha, beta or gamma or consensus interferon. The present
CC sequence represents a substrate for a HCV hammerhead (HH) ribozyme. Note:
CC Some of the sequence data for this patent did not form part of the
CC printed specification. The complete sequence data for this patent was
CC obtained in electronic format directly from the USPTO web site at
CC seqdata.uspto.gov/psipsDIDEntry.html
XX
SQ Sequence 15 BP; 3 A; 5 C; 3 G; 0 T; 4 U; 0 Other;

Query Match 9.0%; Score 11.8; DB 1; Length 15;
Best Local Similarity 86.7%; Pred. No. 1e+02;
Matches 13; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 104 GCAGATAAATGCCTA 118
|||| || |||||||
Db 15 GCAGGTAGATGCCTA 1

RESULT 55
ABC28016
ID ABC28016 standard; DNA; 13 BP.
XX
AC ABC28016;
XX
DT 20-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 28033 for detecting SNP TSC0007915.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 28033; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 5 A; 0 C; 3 G; 5 T; 0 U; 0 Other;

Query Match 8.7%; Score 11.4; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 10 TAAGGTGACTTAT 22
|||||||| ||||
Db 1 TAAGGTGAATTAT 13

RESULT 56
ABC53209
ID ABC53209 standard; DNA; 13 BP.
XX
AC ABC53209;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 53226 for detecting SNP TSC0014704.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 53226; 29pp + Sequence Listing; German.

XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 6 A; 3 C; 0 G; 4 T; 0 U; 0 Other;

Query Match 8.7%; Score 11.4; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 28 TAATCTATCTAAA 40
||||| |||||||
Db 1 TAATCCATCTAAA 13

RESULT 57
ABF13691
ID ABF13691 standard; DNA; 13 BP.
XX
AC ABF13691;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 113688 for detecting SNP TSC0028453.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 113688; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 5 A; 3 C; 0 G; 5 T; 0 U; 0 Other;

Query Match 8.7%; Score 11.4; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 28 TAATCTATCTAAA 40
||||||||||||
Db 1 TCATCTATCTAAA 13

RESULT 58
ABC35896
ID ABC35896 standard; DNA; 13 BP.
XX
AC ABC35896;
XX
DT 20-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 35913 for detecting SNP TSC0011308.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 35913; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 5 A; 0 C; 3 G; 5 T; 0 U; 0 Other;

Query Match 8.7%; Score 11.4; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 9 ATAAGGTGACTTA 21
||||||||| |||
Db 1 ATAAGGTGATTTA 13

RESULT 59

```
ABC35897/c
ID   ABC35897 standard; DNA; 13 BP.
XX
AC   ABC35897;
XX
DT   20-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 35914 for detecting SNP TSC0011308.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 35914; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 3 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          9 ATAAGGTGACTTA 21
              ||||||||| |||
Db         13 ATAAGGTGATTTA 1


RESULT 60
ABC13513/c
ID   ABC13513 standard; DNA; 13 BP.
XX
AC   ABC13513;
XX
DT   20-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 13520 for detecting SNP TSC0003124.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 13520; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 8 A; 1 C; 0 G; 4 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          19 TTATACTTGTAAT 31
               ||||| |||||||
Db          13 TTATATTTGTAAT 1


RESULT 61
ABF97213
ID   ABF97213 standard; DNA; 13 BP.
XX
AC   ABF97213;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 197210 for detecting SNP TSC0048528.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
```

```
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 197210; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 2 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         71 CTAAATTATACCA 83
              ||||||||||| |
Db          1 CTAAATTATACTA 13


RESULT 62
ABF50367
ID   ABF50367 standard; DNA; 13 BP.
XX
AC   ABF50367;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 150364 for detecting SNP TSC0037941.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 150364; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 6 C; 0 G; 3 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        118 AACGACTATCCCT 130
              ||| |||||||||
Db          1 AACCACTATCCCT 13


RESULT 63
ABH33765/c
ID   ABH33765 standard; DNA; 13 BP.
XX
AC   ABH33765;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 233742 for detecting SNP TSC0057049.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 233742; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 4 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
```

```
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          5 GAGTATAAGGTGA 17
              |||||||||| |
Db         13 GAGTATAAGGTTA 1


RESULT 64
ABC53208/c
ID   ABC53208 standard; DNA; 13 BP.
XX
AC   ABC53208;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 53225 for detecting SNP TSC0014704.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 53225; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 3 G; 6 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         28 TAATCTATCTAAA 40
              ||||| |||||||
Db         13 TAATCCATCTAAA 1


RESULT 65
ABC61347
ID   ABC61347 standard; DNA; 13 BP.
XX
AC   ABC61347;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 61364 for detecting SNP TSC0016336.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 61364; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 3 C; 0 G; 6 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         18 CTTATACTTGTAA 30
              |||||||||| |||
Db          1 CTTATACTTCTAA 13


RESULT 66
ABC13512
ID   ABC13512 standard; DNA; 13 BP.
XX
AC   ABC13512;
XX
DT   20-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 13519 for detecting SNP TSC0003124.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
```

```
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 13519; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 1 G; 8 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         19 TTATACTTGTAAT 31
              ||||| |||||||
Db          1 TTATATTTGTAAT 13


RESULT 67
ABF32342/c
ID   ABF32342 standard; DNA; 13 BP.
XX
AC   ABF32342;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 132339 for detecting SNP TSC0033015.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 132339; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 2 A; 1 C; 5 G; 5 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        118 AACGACTATCCCT 130
              |||||||| ||||
Db         13 AACGACTAACCCT 1


RESULT 68
ABC61346/c
ID   ABC61346 standard; DNA; 13 BP.
XX
AC   ABC61346;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 61363 for detecting SNP TSC0016336.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 61363; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
```

```
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 0 C; 3 G; 4 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         18 CTTATACTTGTAA 30
              ||||||||| |||
Db         13 CTTATACTTCTAA 1


RESULT 69
ABF50366/c
ID   ABF50366 standard; DNA; 13 BP.
XX
AC   ABF50366;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 150363 for detecting SNP TSC0037941.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 150363; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 3 A; 0 C; 6 G; 4 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        118 AACGACTATCCCT 130
              ||| |||||||||
Db         13 AACCACTATCCCT 1


RESULT 70
ABC81417
ID   ABC81417 standard; DNA; 13 BP.
XX
AC   ABC81417;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 81434 for detecting SNP TSC0020621.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 81434; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 7 A; 1 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         28 TAATCTATCTAAA 40
              |||||||| ||||
Db          1 TAATCTATATAAA 13


RESULT 71
ABH00081
ID   ABH00081 standard; DNA; 13 BP.
XX
AC   ABH00081;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 200058 for detecting SNP TSC0049230.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
```

KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 200058; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 6 A; 3 C; 0 G; 4 T; 0 U; 0 Other;

Query Match 8.7%; Score 11.4; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 28 TAATCTATCTAAA 40
||| |||||||||
Db 1 TAACCTATCTAAA 13

RESULT 72
ABF58084/c
ID ABF58084 standard; DNA; 13 BP.
XX
AC ABF58084;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 158081 for detecting SNP TSC0006685.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 158081; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 3 A; 0 C; 3 G; 7 T; 0 U; 0 Other;

Query Match 8.7%; Score 11.4; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 71 CTAAATTATACCA 83
| ||||||||||
Db 13 CAAAATTATACCA 1

RESULT 73
ABF32343
ID ABF32343 standard; DNA; 13 BP.
XX
AC ABF32343;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 132340 for detecting SNP TSC0033015.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 132340; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic

```
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 5 C; 1 G; 2 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        118 AACGACTATCCCT 130
              ||||||||| ||||
Db          1 AACGACTAACCCT 13


RESULT 74
ABH01944/c
ID   ABH01944 standard; DNA; 13 BP.
XX
AC   ABH01944;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 201921 for detecting SNP TSC0049639.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 201921; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 7 A; 0 C; 2 G; 4 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         26 TGTAATCTATCTA 38
              | ||||||||||||
Db         13 TTTAATCTATCTA 1


RESULT 75
ABH00080/c
ID   ABH00080 standard; DNA; 13 BP.
XX
AC   ABH00080;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 200057 for detecting SNP TSC0049230.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 200057; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 3 G; 6 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         28 TAATCTATCTAAA 40
              ||| |||||||||
Db         13 TAACCTATCTAAA 1


RESULT 76
ABH02044/c
ID   ABH02044 standard; DNA; 13 BP.
```

```
XX
AC   ABH02044;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 202021 for detecting SNP TSC0049666.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 202021; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 7 A; 0 C; 3 G; 3 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         24 CTTGTAATCTATC 36
               ||| |||||||||
Db         13 CTTTTAATCTATC 1


RESULT 77
ABF58085
ID   ABF58085 standard; DNA; 13 BP.
XX
AC   ABF58085;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 158082 for detecting SNP TSC0006685.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 158082; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 7 A; 3 C; 0 G; 3 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         71 CTAAATTATACCA 83
               | ||||||||||||
Db          1 CAAAATTATACCA 13


RESULT 78
ABC28017/c
ID   ABC28017 standard; DNA; 13 BP.
XX
AC   ABC28017;
XX
DT   20-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 28034 for detecting SNP TSC0007915.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
```

```
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 28034; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 3 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         10 TAAGGTGACTTAT 22
              |||||||| ||||
Db         13 TAAGGTGAATTAT 1


RESULT 79
ABH20654/c
ID   ABH20654 standard; DNA; 13 BP.
XX
AC   ABH20654;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 220631 for detecting SNP TSC0053697.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 220631; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 2 G; 7 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         71 CTAAATTATACCA 83
              |||||||||||| |
Db         13 CTAAATTATACAA 1


RESULT 80
ABH33764
ID   ABH33764 standard; DNA; 13 BP.
XX
AC   ABH33764;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 233741 for detecting SNP TSC0057049.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 233741; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 4 G; 4 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;
```

```
Qy          5 GAGTATAAGGTGA 17
              ||||||||||| |
Db          1 GAGTATAAGGTTA 13
```

RESULT 81
ABH42900
ID ABH42900 standard; DNA; 13 BP.
XX
AC ABH42900;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 242877 for detecting SNP TSC0059278.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 242877; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 4 A; 1 C; 2 G; 6 T; 0 U; 0 Other;

Query Match 8.7%; Score 11.4; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy         19 TTATACTTGTAAT 31
              |||||| ||||||
Db          1 TTATACGTGTAAT 13
```

RESULT 82
ABC81416/c
ID ABC81416 standard; DNA; 13 BP.
XX
AC ABC81416;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 81433 for detecting SNP TSC0020621.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 81433; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 5 A; 0 C; 1 G; 7 T; 0 U; 0 Other;

Query Match 8.7%; Score 11.4; DB 1; Length 13;
Best Local Similarity 92.3%; Pred. No. 1.2e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy         28 TAATCTATCTAAA 40
              |||||||| ||||
Db         13 TAATCTATATAAA 1
```

RESULT 83
ABF44034/c
ID ABF44034 standard; DNA; 13 BP.
XX
AC ABF44034;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 144031 for detecting SNP TSC0036168.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.

XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 144031; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 5 A; 0 C; 3 G; 5 T; 0 U; 0 Other;

```
  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         29 AATCTATCTAAAC 41
              ||||||||| |||
Db         13 AATCTATCTTAAC 1
```

RESULT 84
ABF94136/c
ID ABF94136 standard; DNA; 13 BP.
XX
AC ABF94136;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 194133 for detecting SNP TSC0047740.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 194133; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 3 A; 1 C; 3 G; 6 T; 0 U; 0 Other;

```
  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         71 CTAAATTATACCA 83
              | ||||||||||||
Db         13 CGAAATTATACCA 1
```

RESULT 85
ABF94137
ID ABF94137 standard; DNA; 13 BP.
XX
AC ABF94137;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 194134 for detecting SNP TSC0047740.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 194134; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at

```
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 3 C; 1 G; 3 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         71 CTAAATTATACCA 83
              | ||||||||||||
Db          1 CGAAATTATACCA 13


RESULT 86
ABH01200/c
ID   ABH01200 standard; DNA; 13 BP.
XX
AC   ABH01200;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 201177 for detecting SNP TSC0007953.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 201177; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 1 G; 7 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         28 TAATCTATCTAAA 40
              |||| ||||||||
Db         13 TAATATATCTAAA 1


RESULT 87
ABF44035
ID   ABF44035 standard; DNA; 13 BP.
XX
AC   ABF44035;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 144032 for detecting SNP TSC0036168.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 144032; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 3 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         29 AATCTATCTAAAC 41
              ||||||||| |||
Db          1 AATCTATCTTAAC 13


RESULT 88
ABH20655
ID   ABH20655 standard; DNA; 13 BP.
XX
AC   ABH20655;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 220632 for detecting SNP TSC0053697.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
```

```
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 220632; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 7 A; 2 C; 0 G; 4 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         71 CTAAATTATACCA 83
              ||||||||||| |
Db          1 CTAAATTATACAA 13


RESULT 89
ABF97212/c
ID   ABF97212 standard; DNA; 13 BP.
XX
AC   ABF97212;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 197209 for detecting SNP TSC0048528.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 197209; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 2 G; 6 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         71 CTAAATTATACCA 83
              ||||||||||| |
Db         13 CTAAATTATACTA 1


RESULT 90
ABH42901/c
ID   ABH42901 standard; DNA; 13 BP.
XX
AC   ABH42901;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 242878 for detecting SNP TSC0059278.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 242878; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
```

```
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 2 C; 1 G; 4 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         19 TTATACTTGTAAT 31
               |||||| ||||||
Db         13 TTATACGTGTAAT 1


RESULT 91
ABH01201
ID   ABH01201 standard; DNA; 13 BP.
XX
AC   ABH01201;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 201178 for detecting SNP TSC0007953.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 201178; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 7 A; 1 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         28 TAATCTATCTAAA 40
               |||| ||||||||
Db          1 TAATATATCTAAA 13


RESULT 92
ABF13690/c
ID   ABF13690 standard; DNA; 13 BP.
XX
AC   ABF13690;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 113687 for detecting SNP TSC0028453.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 113687; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 3 G; 5 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         28 TAATCTATCTAAA 40
               | ||||||||||||
Db         13 TCATCTATCTAAA 1


RESULT 93
ABH01945
ID   ABH01945 standard; DNA; 13 BP.
XX
AC   ABH01945;
```

```
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 201922 for detecting SNP TSC0049639.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 201922; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 2 C; 0 G; 7 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         26 TGTAATCTATCTA 38
              | ||||||||||||
Db          1 TTTAATCTATCTA 13


RESULT 94
ABH02045
ID   ABH02045 standard; DNA; 13 BP.
XX
AC   ABH02045;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 202022 for detecting SNP TSC0049666.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 202022; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 3 A; 3 C; 0 G; 7 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 13;
  Best Local Similarity   92.3%;  Pred. No. 1.2e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         24 CTTGTAATCTATC 36
              ||| |||||||||
Db          1 CTTTTAATCTATC 13


RESULT 95
AAT54959/c
ID   AAT54959 standard; RNA; 15 BP.
XX
AC   AAT54959;
XX
DT   25-MAR-2003  (revised)
DT   07-APR-1997  (first entry)
XX
DE   Mouse relA hammerhead ribozyme target sequence (nt. position 1588).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome; AIDS;
KW   ss.
XX
OS   Mus musculus.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB000156.
XX
```

```
PR   23-FEB-1994;   94US-00201109.
PR   29-MAR-1994;   94US-00218934.
PR   04-APR-1994;   94US-00222795.
PR   07-APR-1994;   94US-00224483.
PR   15-APR-1994;   94US-00227958.
PR   15-APR-1994;   94US-00228041.
PR   18-MAY-1994;   94US-00245736.
PR   06-JUL-1994;   94US-00271280.
PR   15-AUG-1994;   94US-00291932.
PR   16-AUG-1994;   94US-00291433.
PR   17-AUG-1994;   94US-00292620.
PR   19-AUG-1994;   94US-00293520.
PR   02-SEP-1994;   94US-00300000.
PR   08-SEP-1994;   94US-00303039.
PR   23-SEP-1994;   94US-00311486.
PR   23-SEP-1994;   94US-00311749.
PR   28-SEP-1994;   94US-00314397.
PR   03-OCT-1994;   94US-00316771.
PR   07-OCT-1994;   94US-00319492.
PR   11-OCT-1994;   94US-00321993.
PR   04-NOV-1994;   94US-00334847.
PR   10-NOV-1994;   94US-00337608.
PR   28-NOV-1994;   94US-00345516.
PR   16-DEC-1994;   94US-00357577.
PR   23-DEC-1994;   94US-00363233.
PR   30-JAN-1995;   95US-00380734.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
PI   Grimm S,  Karpeisky A,  Kisich K,  Matulic-Adamic J,  Mcswiggen JA;
PI   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D,  Thompson JD;
PI   Tracz D,  Usman N,  Wincott FE,  Woolf T;
XX
DR   WPI; 1995-351090/45.
XX
PT   Ribozymes having modified bases and methods for producing them - for use
PT   in inhibiting disease related genes.
XX
PS   Claim 2; Page 226; 407pp; English.
XX
CC   The present sequence represents a preferred target sequence for an
CC   enzymatic nucleic acid (i.e. a ribozyme) which cleaves relA mRNA at the
CC   nucleotide base position indicated in the DE line. The relA gene product
CC   is a subunit of the transcriptional regulator NF-kappaB and is implicated
CC   specifically in the induction of inflammatory responses. Regions of the
CC   mRNA that do not form secondary folding structures and that contain
CC   potential hammerhead and hairpin ribozyme cleavage sites were identified
CC   by computer analysis. Ribozymes directed against these mRNA sequences
CC   were designed and synthesised with modifications that improve their
CC   nuclease resistance. The ribozymes are designed to cleave the target
CC   sequences and thereby inhibit relA expression, making them potentially
CC   useful for treating rheumatoid arthritis, restenosis and asthma as well
CC   as for increasing tolerance to transplanted tissues. The potential
CC   immunosuppressive properties of a ribozyme that cleaves relA mRNA means
CC   that uses are limited to local delivery, acute indications or ex vivo
CC   treatment. (Updated on 25-MAR-2003 to correct PI field.)
XX
SQ   Sequence 15 BP; 3 A; 4 C; 5 G; 0 T; 3 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 1.1e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         48 CCTCTCTAGTAGA 60
              |||||||| |||
Db         14 CCTCTCTAGGAGA 2


RESULT 96
AAT57042/c
ID   AAT57042 standard; RNA; 15 BP.
XX
AC   AAT57042;
XX
DT   27-AUG-2003  (revised)
DT   25-MAR-2003  (revised)
DT   24-APR-1997  (first entry)
XX
DE   RSV 1C hammerhead ribozyme target sequence (nt. position 366).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome; AIDS;
KW   ss.
XX
OS   Respiratory syncytial virus.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB000156.
XX
PR   23-FEB-1994;   94US-00201109.
PR   29-MAR-1994;   94US-00218934.
PR   04-APR-1994;   94US-00222795.
PR   07-APR-1994;   94US-00224483.
PR   15-APR-1994;   94US-00227958.
PR   15-APR-1994;   94US-00228041.
PR   18-MAY-1994;   94US-00245736.
PR   06-JUL-1994;   94US-00271280.
PR   15-AUG-1994;   94US-00291932.
PR   16-AUG-1994;   94US-00291433.
PR   17-AUG-1994;   94US-00292620.
PR   19-AUG-1994;   94US-00293520.
PR   02-SEP-1994;   94US-00300000.
PR   08-SEP-1994;   94US-00303039.
PR   23-SEP-1994;   94US-00311486.
PR   23-SEP-1994;   94US-00311749.
PR   28-SEP-1994;   94US-00314397.
PR   03-OCT-1994;   94US-00316771.
PR   07-OCT-1994;   94US-00319492.
PR   11-OCT-1994;   94US-00321993.
PR   04-NOV-1994;   94US-00334847.
PR   10-NOV-1994;   94US-00337608.
PR   28-NOV-1994;   94US-00345516.
PR   16-DEC-1994;   94US-00357577.
PR   23-DEC-1994;   94US-00363233.
PR   30-JAN-1995;   95US-00380734.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
PI   Grimm S,  Karpeisky A,  Kisich K,  Matulic-Adamic J,  Mcswiggen JA;
PI   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D,  Thompson JD;
PI   Tracz D,  Usman N,  Wincott FE,  Woolf T;
XX
DR   WPI; 1995-351090/45.
XX
PT   Ribozymes having modified bases and methods for producing them - for use
PT   in inhibiting disease related genes.
XX
PS   Claim 2; Page 270; 407pp; English.
XX
CC   The present sequence represents a preferred target sequence for an
CC   enzymatic nucleic acid (i.e. a ribozyme) which cleaves mRNA coding for a
CC   protein of respiratory syncytial virus (RSV) at the nucleotide base
CC   position indicated in the DE line. Regions of the mRNA that do not form
```

```
CC   secondary folding structures and that contain potential hammerhead and
CC   hairpin ribozyme cleavage sites were identified by computer analysis.
CC   Ribozymes directed against these mRNA sequences were designed and
CC   synthesised with modifications that improve their nuclease resistance.
CC   The ribozymes cleave the target sequences and can be used for treatment
CC   and diagnosis of RSV infection. (Updated on 25-MAR-2003 to correct PI
CC   field.) (Updated on 27-AUG-2003 to correct OS field.)
XX
SQ   Sequence 15 BP; 4 A; 2 C; 4 G; 0 T; 5 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 1.1e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         52 TCTAGTAGACAAT 64
              |||||||||| ||
Db         13 TCTAGTAGACCAT 1


RESULT 97
AAT57041/c
ID   AAT57041 standard; RNA; 15 BP.
XX
AC   AAT57041;
XX
DT   27-AUG-2003  (revised)
DT   25-MAR-2003  (revised)
DT   24-APR-1997  (first entry)
XX
DE   RSV 1C hammerhead ribozyme target sequence (nt. position 364).
XX
KW   Enzymatic nucleic acid; ribozyme; trans cleavage; inhibition;
KW   gene expression; downregulation; interleukin-5; IL-5; ICAM-1;
KW   intercellular adhesion molecule; rel A; tumour necrosis factor;
KW   TNF-alpha; respiratory syncytial virus; RSV; bcr-abl; oncogene;
KW   translocation; chronic myelogenous leukaemia; CML; cancer;
KW   Philadelphia chromosome; inflammation; autoimmune disease;
KW   atherosclerosis; myocardial infarction; stroke; restenosis;
KW   transplant rejection; rheumatoid arthritis; psoriasis;
KW   myocardial ischaemia; Kawasaki disease; septic shock; HIV;
KW   human immunodeficiency virus; acquired immune deficiency syndrome; AIDS;
KW   ss.
XX
OS   Respiratory syncytial virus.
XX
PN   WO9523225-A2.
XX
PD   31-AUG-1995.
XX
PF   23-FEB-1995;   95WO-IB000156.
XX
PR   23-FEB-1994;   94US-00201109.
PR   29-MAR-1994;   94US-00218934.
PR   04-APR-1994;   94US-00222795.
PR   07-APR-1994;   94US-00224483.
PR   15-APR-1994;   94US-00227958.
PR   15-APR-1994;   94US-00228041.
PR   18-MAY-1994;   94US-00245736.
PR   06-JUL-1994;   94US-00271280.
PR   15-AUG-1994;   94US-00291932.
PR   16-AUG-1994;   94US-00291433.
PR   17-AUG-1994;   94US-00292620.
PR   19-AUG-1994;   94US-00293520.
PR   02-SEP-1994;   94US-00300000.
PR   08-SEP-1994;   94US-00303039.
PR   23-SEP-1994;   94US-00311486.
PR   23-SEP-1994;   94US-00311749.
PR   28-SEP-1994;   94US-00314397.
PR   03-OCT-1994;   94US-00316771.
PR   07-OCT-1994;   94US-00319492.
PR   11-OCT-1994;   94US-00321993.
PR   04-NOV-1994;   94US-00334847.
PR   10-NOV-1994;   94US-00337608.
PR   28-NOV-1994;   94US-00345516.
PR   16-DEC-1994;   94US-00357577.
PR   23-DEC-1994;   94US-00363233.
PR   30-JAN-1995;   95US-00380734.
XX
PA   (RIBO-) RIBOZYME PHARM INC.
XX
PI   Stinchcomb DT,  Chowrira B,  Direnzo A,  Draper KG,  Dudycz LW;
PI   Grimm S,  Karpeisky A,  Kisich K,  Matulic-Adamic J,  Mcswiggen JA;
PI   Modak A,  Pavco P,  Beigleman L,  Sullivan SM,  Sweedler D,  Thompson JD;
PI   Tracz D,  Usman N,  Wincott FE,  Woolf T;
XX
DR   WPI; 1995-351090/45.
XX
PT   Ribozymes having modified bases and methods for producing them - for use
PT   in inhibiting disease related genes.
XX
PS   Claim 2; Page 270; 407pp; English.
XX
CC   The present sequence represents a preferred target sequence for an
CC   enzymatic nucleic acid (i.e. a ribozyme) which cleaves mRNA coding for a
CC   protein of respiratory syncytial virus (RSV) at the nucleotide base
CC   position indicated in the DE line. Regions of the mRNA that do not form
CC   secondary folding structures and that contain potential hammerhead and
CC   hairpin ribozyme cleavage sites were identified by computer analysis.
CC   Ribozymes directed against these mRNA sequences were designed and
CC   synthesised with modifications that improve their nuclease resistance.
CC   The ribozymes cleave the target sequences and can be used for treatment
CC   and diagnosis of RSV infection. (Updated on 25-MAR-2003 to correct PI
CC   field.) (Updated on 27-AUG-2003 to correct OS field.)
XX
SQ   Sequence 15 BP; 5 A; 2 C; 3 G; 0 T; 5 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 1.1e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         52 TCTAGTAGACAAT 64
              |||||||||| ||
Db         15 TCTAGTAGACCAT 3


RESULT 98
AAX65300/c
ID   AAX65300 standard; RNA; 15 BP.
XX
AC   AAX65300;
XX
DT   20-JUL-1999  (first entry)
XX
DE   Mouse B7-1 hammerhead ribozyme target SEQ ID NO:1932.
XX
KW   Arthritic condition; graft tolerance; immune response; target; cleavage;
KW   hammerhead ribozyme; hairpin ribozyme; human; rabbit; mouse; collagenase;
KW   stromelysin; synovial membrane; joint; arthritis; osteoarthritis;
KW   rheumatoid arthritis; autoimmune disease; allergy; inflammation;
KW   diagnosis; ss.
XX
OS   Mus sp.
XX
PN   WO9618736-A2.
XX
PD   20-JUN-1996.
XX
PF   22-NOV-1995;   95WO-US015516.
XX
PR   13-DEC-1994;   94US-00354920.
PR   23-DEC-1994;   94US-00363253.
PR   23-DEC-1994;   94US-00363254.
PR   17-FEB-1995;   95US-00390850.
PR   20-APR-1995;   95US-00426124.
PR   02-MAY-1995;   95US-00432874.
PR   04-MAY-1995;   95US-00434509.
```

PR 07-JUL-1995; 95US-0000951P.
PR 07-JUL-1995; 95US-0000974P.
PR 07-AUG-1995; 95US-00512861.
PR 05-OCT-1995; 95US-00541365.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Beigelman L, Stinchcomb DT, Jarvis T, Draper K, Pavco P;
PI Mcswiggen J, Gustofson J, Usman N, Wincott F, Matulic-Adamic J;
PI Karpeisky A, Thompson JD, Modak A, Burgin A;
XX
DR WPI; 1996-300653/30.
XX
PT Enzymatic nucleic acid molecules having a hammer-head motif - used for
PT the treatment of arthritis, induction of graft tolerance or treatment of
PT auto-immune diseases.
XX
PS Claim 10; Page 179; 307pp; English.
XX
CC The present invention describes a novel enzymatic nucleic acid (ENA)
CC having a hammerhead motif (HM) comprising: (i) at least 5 ribose residues
CC ; (ii) a 2'-C-allyl modification at position 4 of the ENA; (iii) at least
CC ten 2'-O-methyl modifications; and (iv) a 3'-end modification. The ENA's
CC can inhibit collagenase and stromelysin production in the synovial
CC membrane of joints for the treatment or prevention of arthritis,
CC particularly osteoarthritis or rheumatoid arthritis. The ENA's can also
CC be used to treat antigen presenting cells of a donor to induce tolerance
CC in a recipient to an alloantigen of a donor. They can also be used for
CC enhancing graft tolerance or for treating autoimmune disease, and for
CC treating allergies and other inflammatory conditions. The ENA's can also
CC be used in diagnosis. Ribozyme therapy impacts on the expression of
CC stromelysin without introducing the non-specific effects upon gene
CC expression which accompany treatment with retinoids and dexamethasone.
CC The concentration of ribozyme required to affect a therapeutic treatment
CC is lower than that required of antisense molecules, and is highly
CC specific. The present sequence is used in the exemplification of the
CC present invention
XX
SQ Sequence 15 BP; 5 A; 4 C; 3 G; 0 T; 3 U; 0 Other;

Query Match 8.7%; Score 11.4; DB 1; Length 15;
Best Local Similarity 92.3%; Pred. No. 1.1e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 87 TCGTCTTGATGCC 99
|||| ||||||||
Db 15 TCGTATTGATGCC 3

RESULT 99
AAX65299/c
ID AAX65299 standard; RNA; 15 BP.
XX
AC AAX65299;
XX
DT 20-JUL-1999 (first entry)
XX
DE Mouse B7-1 hammerhead ribozyme target SEQ ID NO:1931.
XX
KW Arthritic condition; graft tolerance; immune response; target; cleavage;
KW hammerhead ribozyme; hairpin ribozyme; human; rabbit; mouse; collagenase;
KW stromelysin; synovial membrane; joint; arthritis; osteoarthritis;
KW rheumatoid arthritis; autoimmune disease; allergy; inflammation;
KW diagnosis; ss.
XX
OS Mus sp.
XX
PN WO9618736-A2.
XX
PD 20-JUN-1996.
XX
PF 22-NOV-1995; 95WO-US015516.
XX
PR 13-DEC-1994; 94US-00354920.
PR 23-DEC-1994; 94US-00363253.
PR 23-DEC-1994; 94US-00363254.
PR 17-FEB-1995; 95US-00390850.
PR 20-APR-1995; 95US-00426124.
PR 02-MAY-1995; 95US-00432874.
PR 04-MAY-1995; 95US-00434509.
PR 07-JUL-1995; 95US-0000951P.
PR 07-JUL-1995; 95US-0000974P.
PR 07-AUG-1995; 95US-00512861.
PR 05-OCT-1995; 95US-00541365.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Beigelman L, Stinchcomb DT, Jarvis T, Draper K, Pavco P;
PI Mcswiggen J, Gustofson J, Usman N, Wincott F, Matulic-Adamic J;
PI Karpeisky A, Thompson JD, Modak A, Burgin A;
XX
DR WPI; 1996-300653/30.
XX
PT Enzymatic nucleic acid molecules having a hammer-head motif - used for
PT the treatment of arthritis, induction of graft tolerance or treatment of
PT auto-immune diseases.
XX
PS Claim 10; Page 179; 307pp; English.
XX
CC The present invention describes a novel enzymatic nucleic acid (ENA)
CC having a hammerhead motif (HM) comprising: (i) at least 5 ribose residues
CC ; (ii) a 2'-C-allyl modification at position 4 of the ENA; (iii) at least
CC ten 2'-O-methyl modifications; and (iv) a 3'-end modification. The ENA's
CC can inhibit collagenase and stromelysin production in the synovial
CC membrane of joints for the treatment or prevention of arthritis,
CC particularly osteoarthritis or rheumatoid arthritis. The ENA's can also
CC be used to treat antigen presenting cells of a donor to induce tolerance
CC in a recipient to an alloantigen of a donor. They can also be used for
CC enhancing graft tolerance or for treating autoimmune disease, and for
CC treating allergies and other inflammatory conditions. The ENA's can also
CC be used in diagnosis. Ribozyme therapy impacts on the expression of
CC stromelysin without introducing the non-specific effects upon gene
CC expression which accompany treatment with retinoids and dexamethasone.
CC The concentration of ribozyme required to affect a therapeutic treatment
CC is lower than that required of antisense molecules, and is highly
CC specific. The present sequence is used in the exemplification of the
CC present invention
XX
SQ Sequence 15 BP; 5 A; 4 C; 3 G; 0 T; 3 U; 0 Other;

Query Match 8.7%; Score 11.4; DB 1; Length 15;
Best Local Similarity 92.3%; Pred. No. 1.1e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 87 TCGTCTTGATGCC 99
|||| ||||||||
Db 15 TCGTATTGATGCC 3

RESULT 100
AAX31607/c
ID AAX31607 standard; DNA; 15 BP.
XX
AC AAX31607;
XX
DT 21-MAY-1999 (first entry)
XX
DE Tag sequence of a transcript increased in pancreatic cancer.
XX
KW Tag sequence; colorectal cancer; pancreatic cancer; colon cancer;
KW diagnosis; prognosis; treatment; ss.
XX
OS Homo sapiens.
XX
PN WO9853319-A2.
XX

PD 26-NOV-1998.
XX
PF 20-MAY-1998; 98WO-US010277.
XX
PR 21-MAY-1997; 97US-0047352P.
XX
PA (UYJO) UNIV JOHNS HOPKINS.
XX
PI Vogelstein B, Kinzler KW;
XX
DR WPI; 1999-070161/06.
XX
PT Use of isolated gene transcripts - useful for developing products for the
PT diagnosis, prognosis and treatment of cancers, particularly colon and
PT pancreatic cancer.
XX
PS Claim 13; Page 64; 120pp; English.
XX
CC AAX30947-31815 represent tag sequences of transcripts that are
CC differentially expressed in colorectal cancer, in pancreatic cancer, or
CC in both. The tag sequences can be used to identify genes by matching the
CC tag to a gen data base member, or by using the tag sequences as probes to
CC isolate unidentified genes from cDNA libraries. The tag sequences can
CC also be used in a method for diagnosing colon or pancreatic cancer in a
CC sample suspected of being neoplastic. The method comprises comparing the
CC level of at least one transcript in a first sample of a tissue to a
CC second sample, where the first sample is a colonic tissue suspected of
CC being neoplastic and the second sample is a normal human colonic tissue.
CC The transcript is identified by a tag selected from AAX30947-31815. The
CC methods of the invention can be used in the diagnosis, prognosis and
CC treatment of cancer
XX
SQ Sequence 15 BP; 2 A; 2 C; 6 G; 5 T; 0 U; 0 Other;

Query Match 8.7%; Score 11.4; DB 1; Length 15;
Best Local Similarity 92.3%; Pred. No. 1.1e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 58 AGACAATCCCGTG 70
||||||||||.||
Db 13 AGACAATCCCATG 1

RESULT 101
AAF48426/c
ID AAF48426 standard; DNA; 15 BP.
XX
AC AAF48426;
XX
DT 30-MAR-2001 (first entry)
XX
DE IGFBP3 oligonucleotide #1846.
XX
KW Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic;
KW cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid;
KW skin disorder; Insulin-like Growth Factor 1 receptor; IGF-1; pityriasis;
KW IGF binding protein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris;
KW growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba;
KW keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease;
KW hyperneovascular condition; hyperplasia; kidney disease;
KW neovascular condition of the retina; ss.
XX
OS Homo sapiens.
XX
PN WO200078341-A1.
XX
PD 28-DEC-2000.
XX
PF 21-JUN-2000; 2000WO-AU000693.
XX
PR 21-JUN-1999; 99US-0140345P.
XX
PA (MURD-) MURDOCH CHILDRENS RES INST.
XX
PI Wraight CJ, Werther GA, Edmondson SR;
XX
DR WPI; 2001-041421/05.
XX
PT Ameliorating the effects of a disorder, e.g. psoriasis, by administering
PT UV (ultra-violet) treatment (optional) and an antisense nucleic acid that
PT inhibits or reduces growth factor mediated cell proliferation and/or
PT inflammation.
XX
PS Example 7; Page 56; 201pp; English.
XX
CC The present invention relates to a method for ameliorating the effects of
CC skin disorders. The method comprises contacting the skin with an
CC antisense oligonucleotide, (for Insulin-like Growth Factor [IGF]-1
CC receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of
CC inhibiting or reducing growth factor mediated cell proliferation,
CC inflammation and/or other disorders. The present sequence is an
CC oligonucleotide which can be used to design the antisense
CC oligonucleotides of the present invention (see AAF45151 and AAF45153-
CC F45161). The method is useful for ameliorating the effects of psoriasis,
CC ichthyosis, pityriasis, ruba, pilaris, serborrhoea, keloids, keratosis,
CC neoplasias, scleroderma, warts, benign growths, cancers of the skin, a
CC hyperneovascular condition such as a neovascular condition of the retina,
CC brain or skin, growth factor-mediated malignancies, other sclerotic
CC disease, kidney disease, hyperproliferation of the inside of blood
CC vessels or any other hyperplasia
XX
SQ Sequence 15 BP; 5 A; 4 C; 3 G; 3 T; 0 U; 0 Other;

Query Match 8.7%; Score 11.4; DB 1; Length 15;
Best Local Similarity 92.3%; Pred. No. 1.1e+02;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 83 AGCATCGTCTTGA 95
||| |||||||||
Db 14 AGCTTCGTCTTGA 2

RESULT 102
AAF48427/c
ID AAF48427 standard; DNA; 15 BP.
XX
AC AAF48427;
XX
DT 30-MAR-2001 (first entry)
XX
DE IGFBP3 oligonucleotide #1847.
XX
KW Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic;
KW cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid;
KW skin disorder; Insulin-like Growth Factor 1 receptor; IGF-1; pityriasis;
KW IGF binding protein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris;
KW growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba;
KW keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease;
KW hyperneovascular condition; hyperplasia; kidney disease;
KW neovascular condition of the retina; ss.
XX
OS Homo sapiens.
XX
PN WO200078341-A1.
XX
PD 28-DEC-2000.
XX
PF 21-JUN-2000; 2000WO-AU000693.
XX
PR 21-JUN-1999; 99US-0140345P.
XX
PA (MURD-) MURDOCH CHILDRENS RES INST.
XX
PI Wraight CJ, Werther GA, Edmondson SR;
XX
DR WPI; 2001-041421/05.

```
XX
PT   Ameliorating the effects of a disorder, e.g. psoriasis, by administering
PT   UV (ultra-violet) treatment (optional) and an antisense nucleic acid that
PT   inhibits or reduces growth factor mediated cell proliferation and/or
PT   inflammation.
XX
PS   Example 7; Page 56; 201pp; English.
XX
CC   The present invention relates to a method for ameliorating the effects of
CC   skin disorders. The method comprises contacting the skin with an
CC   antisense oligonucleotide, (for Insulin-like Growth Factor [IGF]-1
CC   receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of
CC   inhibiting or reducing growth factor mediated cell proliferation,
CC   inflammation and/or other disorders. The present sequence is an
CC   oligonucleotide which can be used to design the antisense
CC   oligonucleotides of the present invention (see AAF45151 and AAF45153-
CC   F45161). The method is useful for ameliorating the effects of psoriasis,
CC   ichthyosis, pityriasis, ruba, pilaris, serborrhoea, keloids, keratosis,
CC   neoplasias, scleroderma, warts, benign growths, cancers of the skin, a
CC   hyperneovascular condition such as a neovascular condition of the retina,
CC   brain or skin, growth factor-mediated malignancies, other sclerotic
CC   disease, kidney disease, hyperproliferation of the inside of blood
CC   vessels or any other hyperplasia
XX
SQ   Sequence 15 BP; 6 A; 3 C; 3 G; 3 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 1.1e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         83 AGCATCGTCTTGA 95
               ||| |||||||||
Db         13 AGCTTCGTCTTGA 1


RESULT 103
AAF47618/c
ID   AAF47618 standard; DNA; 15 BP.
XX
AC   AAF47618;
XX
DT   30-MAR-2001  (first entry)
XX
DE   IGFBP3 oligonucleotide #1038.
XX
KW   Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic;
KW   cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid;
KW   skin disorder; Insulin-like Growth Factor 1 receptor; IGF-1; pityriasis;
KW   IGF binding protein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris;
KW   growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba;
KW   keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease;
KW   hyperneovascular condition; hyperplasia; kidney disease;
KW   neovascular condition of the retina; ss.
XX
OS   Homo sapiens.
XX
PN   WO200078341-A1.
XX
PD   28-DEC-2000.
XX
PF   21-JUN-2000; 2000WO-AU000693.
XX
PR   21-JUN-1999;   99US-0140345P.
XX
PA   (MURD-) MURDOCH CHILDRENS RES INST.
XX
PI   Wraight CJ,  Werther GA,  Edmondson SR;
XX
DR   WPI; 2001-041421/05.
XX
PT   Ameliorating the effects of a disorder, e.g. psoriasis, by administering
PT   UV (ultra-violet) treatment (optional) and an antisense nucleic acid that
PT   inhibits or reduces growth factor mediated cell proliferation and/or
PT   inflammation.
XX
PS   Example 7; Page 50; 201pp; English.
XX
CC   The present invention relates to a method for ameliorating the effects of
CC   skin disorders. The method comprises contacting the skin with an
CC   antisense oligonucleotide, (for Insulin-like Growth Factor [IGF]-1
CC   receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of
CC   inhibiting or reducing growth factor mediated cell proliferation,
CC   inflammation and/or other disorders. The present sequence is an
CC   oligonucleotide which can be used to design the antisense
CC   oligonucleotides of the present invention (see AAF45151 and AAF45153-
CC   F45161). The method is useful for ameliorating the effects of psoriasis,
CC   ichthyosis, pityriasis, ruba, pilaris, serborrhoea, keloids, keratosis,
CC   neoplasias, scleroderma, warts, benign growths, cancers of the skin, a
CC   hyperneovascular condition such as a neovascular condition of the retina,
CC   brain or skin, growth factor-mediated malignancies, other sclerotic
CC   disease, kidney disease, hyperproliferation of the inside of blood
CC   vessels or any other hyperplasia
XX
SQ   Sequence 15 BP; 5 A; 4 C; 4 G; 2 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 1.1e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         95 ATGCCCTTGGCAG 107
               ||| |||||||||
Db         15 ATGTCCTTGGCAG 3


RESULT 104
AAF47619/c
ID   AAF47619 standard; DNA; 15 BP.
XX
AC   AAF47619;
XX
DT   30-MAR-2001  (first entry)
XX
DE   IGFBP3 oligonucleotide #1039.
XX
KW   Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic;
KW   cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid;
KW   skin disorder; Insulin-like Growth Factor 1 receptor; IGF-1; pityriasis;
KW   IGF binding protein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris;
KW   growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba;
KW   keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease;
KW   hyperneovascular condition; hyperplasia; kidney disease;
KW   neovascular condition of the retina; ss.
XX
OS   Homo sapiens.
XX
PN   WO200078341-A1.
XX
PD   28-DEC-2000.
XX
PF   21-JUN-2000; 2000WO-AU000693.
XX
PR   21-JUN-1999;   99US-0140345P.
XX
PA   (MURD-) MURDOCH CHILDRENS RES INST.
XX
PI   Wraight CJ,  Werther GA,  Edmondson SR;
XX
DR   WPI; 2001-041421/05.
XX
PT   Ameliorating the effects of a disorder, e.g. psoriasis, by administering
PT   UV (ultra-violet) treatment (optional) and an antisense nucleic acid that
PT   inhibits or reduces growth factor mediated cell proliferation and/or
PT   inflammation.
XX
PS   Example 7; Page 50; 201pp; English.
XX
```

```
CC   The present invention relates to a method for ameliorating the effects of
CC   skin disorders. The method comprises contacting the skin with an
CC   antisense oligonucleotide, (for Insulin-like Growth Factor [IGF]-1
CC   receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of
CC   inhibiting or reducing growth factor mediated cell proliferation,
CC   inflammation and/or other disorders. The present sequence is an
CC   oligonucleotide which can be used to design the antisense
CC   oligonucleotides of the present invention (see AAF45151 and AAF45153-
CC   F45161). The method is useful for ameliorating the effects of psoriasis,
CC   ichthyosis, pityriasis, ruba, pilaris, serborrhoea, keloids, keratosis,
CC   neoplasias, scleroderma, warts, benign growths, cancers of the skin, a
CC   hyperneovascular condition such as a neovascular condition of the retina,
CC   brain or skin, growth factor-mediated malignancies, other sclerotic
CC   disease, kidney disease, hyperproliferation of the inside of blood
CC   vessels or any other hyperplasia
XX
SQ   Sequence 15 BP; 5 A; 4 C; 4 G; 2 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 1.1e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         95 ATGCCCTTGGCAG 107
               ||| |||||||||
Db         14 ATGTCCTTGGCAG 2


RESULT 105
AAF48425/c
ID   AAF48425 standard; DNA; 15 BP.
XX
AC   AAF48425;
XX
DT   30-MAR-2001  (first entry)
XX
DE   IGFBP3 oligonucleotide #1845.
XX
KW   Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic;
KW   cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid;
KW   skin disorder; Insulin-like Growth Factor 1 receptor; IGF-1; pityriasis;
KW   IGF binding protein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris;
KW   growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba;
KW   keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease;
KW   hyperneovascular condition; hyperplasia; kidney disease;
KW   neovascular condition of the retina; ss.
XX
OS   Homo sapiens.
XX
PN   WO200078341-A1.
XX
PD   28-DEC-2000.
XX
PF   21-JUN-2000; 2000WO-AU000693.
XX
PR   21-JUN-1999;   99US-0140345P.
XX
PA   (MURD-) MURDOCH CHILDRENS RES INST.
XX
PI   Wraight CJ,  Werther GA,  Edmondson SR;
XX
DR   WPI; 2001-041421/05.
XX
PT   Ameliorating the effects of a disorder, e.g. psoriasis, by administering
PT   UV (ultra-violet) treatment (optional) and an antisense nucleic acid that
PT   inhibits or reduces growth factor mediated cell proliferation and/or
PT   inflammation.
XX
PS   Example 7; Page 56; 201pp; English.
XX
CC   The present invention relates to a method for ameliorating the effects of
CC   skin disorders. The method comprises contacting the skin with an
CC   antisense oligonucleotide, (for Insulin-like Growth Factor [IGF]-1
CC   receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of
CC   inhibiting or reducing growth factor mediated cell proliferation,
CC   inflammation and/or other disorders. The present sequence is an
CC   oligonucleotide which can be used to design the antisense
CC   oligonucleotides of the present invention (see AAF45151 and AAF45153-
CC   F45161). The method is useful for ameliorating the effects of psoriasis,
CC   ichthyosis, pityriasis, ruba, pilaris, serborrhoea, keloids, keratosis,
CC   neoplasias, scleroderma, warts, benign growths, cancers of the skin, a
CC   hyperneovascular condition such as a neovascular condition of the retina,
CC   brain or skin, growth factor-mediated malignancies, other sclerotic
CC   disease, kidney disease, hyperproliferation of the inside of blood
CC   vessels or any other hyperplasia
XX
SQ   Sequence 15 BP; 6 A; 4 C; 3 G; 2 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 1.1e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         83 AGCATCGTCTTGA 95
               ||| |||||||||
Db         15 AGCTTCGTCTTGA 3


RESULT 106
AAS19622
ID   AAS19622 standard; DNA; 15 BP.
XX
AC   AAS19622;
XX
DT   26-MAR-2002  (first entry)
XX
DE   ASO primer #1 to detect human GHRHR gene polymorphisms.
XX
KW   Human; single nucleotide polymorphism; SNP; GHRHR; chromosome 7p14;
KW   growth hormone releasing hormone receptor; haplotyping; genotyping;
KW   isolated growth hormone deficiency; IGHD; pituitary adenoma; ASO;
KW   allele-specific oligonucleotide; primer; ss.
XX
OS   Homo sapiens.
XX
PN   WO200179239-A2.
XX
PD   25-OCT-2001.
XX
PF   17-APR-2001; 2001WO-US012453.
XX
PR   17-APR-2000; 2000US-0197978P.
XX
PA   (GENA-) GENAISSANCE PHARM INC.
XX
PI   Chew A,  Choi JY,  Denton RR,  Nandabalan K,  Sausker EA;
XX
DR   WPI; 2002-066342/09.
XX
PT   Genotyping human Growth hormone releasing hormone receptor gene of
PT   individual for determining haplotype of individual by determining
PT   identity of nucleotide pair at specific polymorphic sites for two copies
PT   of gene.
XX
PS   Claim 16; Page 14; 90pp; English.
XX
CC   The present invention relates to novel single nucleotide polymorphisms
CC   (SNPs) in the human growth hormone releasing hormone receptor (GHRHR)
CC   gene located on chromosome 7p14, and methods for haplotyping and/or
CC   genotyping the GHRHR gene. The methods of the invention make use of
CC   allele-specific oligonucleotides (ASOs) as probes and primers and/or
CC   primer-extension oligonucleotides for detecting the GHRHR gene
CC   polymorphisms. The polynucleotides and screened compounds are useful for
CC   the treatment of diseases associated with GHRHR activity, such as
CC   isolated growth hormone deficiency (IGHD) and pituitary adenomas.
CC   AAS19622-AAS19647 represent ASO primers for detecting human GHRHR gene
CC   polymorphisms
XX
```

```
SQ   Sequence 15 BP; 5 A; 2 C; 6 G; 1 T; 0 U; 1 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   80.0%;  Pred. No. 1.1e+02;
  Matches   12;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          2 CCTGAGTATAAGGTG 16
              || ||||| ||||:|
Db          1 CCAGAGTAGAAGGYG 15


RESULT 107
ABK32561/c
ID   ABK32561 standard; DNA; 15 BP.
XX
AC   ABK32561;
XX
DT   23-APR-2002  (first entry)
XX
DE   Human pancreatic cancer SAGE tag #113.
XX
KW   Human; colon cancer; colorectal cancer; pancreatic cancer; SAGE tag;
KW   serial analysis of gene expression; diagnostic; prognostic; probe;
KW   cancer marker; ss.
XX
OS   Homo sapiens.
XX
PN   US6333152-B1.
XX
PD   25-DEC-2001.
XX
PF   20-MAY-1998;   98US-00081646.
XX
PR   20-MAY-1998;   98US-00081646.
XX
PA   (UYJO ) UNIV JOHNS HOPKINS.
XX
PI   Vogelstein B,  Kinzler KW,  Zhang L,  Zhou W;
XX
DR   WPI; 2002-153821/20.
XX
PT   New human nucleic acid containing specific SAGE tags, useful as
PT   diagnostic markers for cancer, also derived probes.
XX
PS   Disclosure; Col 76; 161pp; English.
XX
CC   The invention relates to an isolated, purified human nucleic acid (I)
CC   that has the same sequence as a mRNA found in humans and is a SAGE
CC   (serial analysis of gene expression) tag comprising a single stranded
CC   probe containing at least 10 consecutive nucleotides. SAGE tags, are
CC   diagnostic and prognostic markers of cancer, especially of the colon and
CC   pancreas. ABK31900-ABK32770 represent human colon and pancreatic cancer
CC   SAGE tags of the invention
XX
SQ   Sequence 15 BP; 2 A; 2 C; 6 G; 5 T; 0 U; 0 Other;

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 1.1e+02;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         58 AGACAATCCCGTG 70
              |||||||||| ||
Db         13 AGACAATCCCATG 1


RESULT 108
ABI21898/c
ID   ABI21898 standard; DNA; 12 BP.
XX
AC   ABI21898;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 321871 for detecting SNP TSC0030537.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 321871; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 3 A; 0 C; 3 G; 6 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCA 83
              ||||||||||
Db         12 AAATTATACCA 2


RESULT 109
ABH80958/c
ID   ABH80958 standard; DNA; 12 BP.
XX
AC   ABH80958;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 280951 for detecting SNP TSC0009274.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
```

XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 280951; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 12 BP; 5 A; 0 C; 2 G; 5 T; 0 U; 0 Other;

Query Match 8.4%; Score 11; DB 1; Length 12;
Best Local Similarity 100.0%; Pred. No. 1.3e+02;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 72 TAAATTATACC 82
||||||||||
Db 11 TAAATTATACC 1

RESULT 110
ABI76786
ID ABI76786 standard; DNA; 12 BP.
XX
AC ABI76786;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide primer SEQ ID NO 376759 for detecting SNP TSC0005783.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 376759; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 12 BP; 6 A; 2 C; 0 G; 4 T; 0 U; 0 Other;

Query Match 8.4%; Score 11; DB 1; Length 12;
Best Local Similarity 100.0%; Pred. No. 1.3e+02;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 71 CTAAATTATAC 81
||||||||||
Db 2 CTAAATTATAC 12

RESULT 111
ABI17426
ID ABI17426 standard; DNA; 12 BP.
XX
AC ABI17426;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide primer SEQ ID NO 317399 for detecting SNP TSC0027974.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 317399; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at

```
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 5 A; 2 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         71 CTAAATTATAC 81
               ||||||||||
Db          2 CTAAATTATAC 12


RESULT 112
ABI12345
ID   ABI12345 standard; DNA; 12 BP.
XX
AC   ABI12345;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 312318 for detecting SNP TSC0025000.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 312318; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 5 A; 0 C; 4 G; 3 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 TGAGTATAAGG 14
              ||||||||||
Db          1 TGAGTATAAGG 11


RESULT 113
ABI48995/c
ID   ABI48995 standard; DNA; 12 BP.
XX
AC   ABI48995;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 348968 for detecting SNP TSC0045843.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 348968; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 5 A; 0 C; 2 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         29 AATCTATCTAA 39
              ||||||||||
Db         12 AATCTATCTAA 2


RESULT 114
ABI70304/c
ID   ABI70304 standard; DNA; 12 BP.
XX
AC   ABI70304;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 370277 for detecting SNP TSC0058089.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
```

```
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 370277; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 4 A; 0 C; 4 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         31 TCTATCTAAAC 41
              ||||||||||
Db         11 TCTATCTAAAC 1


RESULT 115
ABI19205/c
ID   ABI19205 standard; DNA; 12 BP.
XX
AC   ABI19205;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 319178 for detecting SNP TSC0029109.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 319178; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 2 A; 1 C; 4 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        115 CCTAACGACTA 125
              ||||||||||
Db         11 CCTAACGACTA 1


RESULT 116
ABI00255/c
ID   ABI00255 standard; DNA; 12 BP.
XX
AC   ABI00255;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 300228 for detecting SNP TSC0018915.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 300228; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
```

```
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 5 A; 0 C; 2 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         71 CTAAATTATAC 81
              ||||||||||
Db         11 CTAAATTATAC 1


RESULT 117
ABI04248
ID   ABI04248 standard; DNA; 12 BP.
XX
AC   ABI04248;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 304221 for detecting SNP TSC0020826.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 304221; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 6 A; 2 C; 0 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         71 CTAAATTATAC 81
              ||||||||||
Db          1 CTAAATTATAC 11


RESULT 118
ABH88751/c
ID   ABH88751 standard; DNA; 12 BP.
XX
AC   ABH88751;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 288744 for detecting SNP TSC0013654.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 288744; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 4 A; 4 C; 0 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          7 GTATAAGGTGA 17
              ||||||||||
Db         12 GTATAAGGTGA 2


RESULT 119
ABH83435
ID   ABH83435 standard; DNA; 12 BP.
XX
AC   ABH83435;
```

```
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 283428 for detecting SNP TSC0011305.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 283428; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 4 A; 4 C; 0 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         31 TCTATCTAAAC 41
              ||||||||||
Db          2 TCTATCTAAAC 12


RESULT 120
ABI71223/c
ID   ABI71223 standard; DNA; 12 BP.
XX
AC   ABI71223;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 371196 for detecting SNP TSC0058640.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 371196; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 5 A; 0 C; 3 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         31 TCTATCTAAAC 41
              ||||||||||
Db         12 TCTATCTAAAC 2


RESULT 121
ABI70151/c
ID   ABI70151 standard; DNA; 12 BP.
XX
AC   ABI70151;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 370124 for detecting SNP TSC0058010.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
```

```
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 370124; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 3 A; 0 C; 2 G; 7 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCA 83
              ||||||||||
Db         12 AAATTATACCA 2


RESULT 122
ABI30589
ID   ABI30589 standard; DNA; 12 BP.
XX
AC   ABI30589;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 330562 for detecting SNP TSC0035580.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 330562; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 5 A; 2 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         28 TAATCTATCTA 38
              ||||||||||
Db          2 TAATCTATCTA 12


RESULT 123
ABI39973
ID   ABI39973 standard; DNA; 12 BP.
XX
AC   ABI39973;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 339946 for detecting SNP TSC0007645.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 339946; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 5 A; 2 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         72 TAAATTATACC 82
              ||||||||||
```

```
Db          1 TAAATTATACC 11


RESULT 124
ABH83015
ID   ABH83015 standard; DNA; 12 BP.
XX
AC   ABH83015;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 283008 for detecting SNP TSC0011092.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 283008; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 6 A; 3 C; 0 G; 3 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCA 83
              ||||||||||
Db          1 AAATTATACCA 11


RESULT 125
ABH86779/c
ID   ABH86779 standard; DNA; 12 BP.
XX
AC   ABH86779;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 286772 for detecting SNP TSC0012815.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 286772; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 4 A; 0 C; 2 G; 6 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         72 TAAATTATACC 82
              ||||||||||
Db         11 TAAATTATACC 1


RESULT 126
ABC69069
ID   ABC69069 standard; DNA; 13 BP.
XX
AC   ABC69069;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 69086 for detecting SNP TSC0017981.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
```

```
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 69086; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 2 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match              8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         72 TAAATTATACC 82
              ||||||||||
Db          3 TAAATTATACC 13


RESULT 127
ABF05684/c
ID   ABF05684 standard; DNA; 13 BP.
XX
AC   ABF05684;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 105681 for detecting SNP TSC0026488.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 105681; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 0 C; 2 G; 5 T; 0 U; 0 Other;

  Query Match              8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         72 TAAATTATACC 82
              ||||||||||
Db          12 TAAATTATACC 2


RESULT 128
ABC87292
ID   ABC87292 standard; DNA; 13 BP.
XX
AC   ABC87292;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 87309 for detecting SNP TSC0021951.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 87309; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
```

```
SQ   Sequence 13 BP; 5 A; 0 C; 5 G; 3 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 GAGTATAAGGT 15
              ||||||||||
Db          3 GAGTATAAGGT 13


RESULT 129
ABH22531/c
ID   ABH22531 standard; DNA; 13 BP.
XX
AC   ABH22531;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 222508 for detecting SNP TSC0054138.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 222508; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 4 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 AGTATAAGGTG 16
              ||||||||||
Db         13 AGTATAAGGTG 3


RESULT 130
ABF16585/c
ID   ABF16585 standard; DNA; 13 BP.
XX
AC   ABF16585;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 116582 for detecting SNP TSC0029177.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 116582; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 3 A; 6 C; 0 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 GAGTATAAGGT 15
              ||||||||||
Db         11 GAGTATAAGGT 1


RESULT 131
ABF17819
ID   ABF17819 standard; DNA; 13 BP.
XX
AC   ABF17819;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 117816 for detecting SNP TSC0029452.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
```

XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 117816; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 4 A; 2 C; 0 G; 6 T; 0 U; 1 Other;

Query Match 8.4%; Score 11; DB 1; Length 13;
Best Local Similarity 84.6%; Pred. No. 1.3e+02;
Matches 11; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 16 GACTTATACTTGT 28
:|||||||||| |
Db 1 RACTTATACTTAT 13

RESULT 132
ABF23104/c
ID ABF23104 standard; DNA; 13 BP.
XX
AC ABF23104;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 123101 for detecting SNP TSC0030780.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 123101; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 5 A; 0 C; 3 G; 5 T; 0 U; 0 Other;

Query Match 8.4%; Score 11; DB 1; Length 13;
Best Local Similarity 100.0%; Pred. No. 1.3e+02;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 31 TCTATCTAAAC 41
|||||||||||
Db 13 TCTATCTAAAC 3

RESULT 133
ABF31691
ID ABF31691 standard; DNA; 13 BP.
XX
AC ABF31691;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 131688 for detecting SNP TSC0032867.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 131688; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,

```
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 2 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCA 83
              ||||||||||
Db          1 AAATTATACCA 11


RESULT 134
ABC69068/c
ID   ABC69068 standard; DNA; 13 BP.
XX
AC   ABC69068;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 69085 for detecting SNP TSC0017981.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 69085; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 2 G; 6 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         72 TAAATTATACC 82
              ||||||||||
Db         11 TAAATTATACC 1


RESULT 135
ABF46246/c
ID   ABF46246 standard; DNA; 13 BP.
XX
AC   ABF46246;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 146243 for detecting SNP TSC0036845.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 146243; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 2 G; 6 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         28 TAATCTATCTA 38
              ||||||||||
Db         11 TAATCTATCTA 1


RESULT 136
ABF57605
ID   ABF57605 standard; DNA; 13 BP.
XX
AC   ABF57605;
XX
DT   21-FEB-2002  (first entry)
```

```
XX
DE   Oligonucleotide SEQ ID NO 157602 for detecting SNP TSC0039698.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 157602; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 7 A; 2 C; 0 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCA 83
              ||||||||||
Db          1 AAATTATACCA 11


RESULT 137
ABH10656
ID   ABH10656 standard; DNA; 13 BP.
XX
AC   ABH10656;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 210633 for detecting SNP TSC0051423.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 210633; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 1 G; 6 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         20 TATACTTGTAATC 32
              |||| |||||||:
Db          1 TATAATTGTAATY 13


RESULT 138
ABH37264/c
ID   ABH37264 standard; DNA; 13 BP.
XX
AC   ABH37264;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 237241 for detecting SNP TSC0057862.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
```

```
XX
PS   Claim 1; SEQ ID NO 237241; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 2 G; 7 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         30 ATCTATCTAAA 40
              ||||||||||
Db         13 ATCTATCTAAA 3


RESULT 139
ABH03008/c
ID   ABH03008 standard; DNA; 13 BP.
XX
AC   ABH03008;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 202985 for detecting SNP TSC0049850.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 202985; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 3 G; 5 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCAGC 85
              :|||||||||| |
Db         13 RAATTATACCATC 1


RESULT 140
ABC68529
ID   ABC68529 standard; DNA; 13 BP.
XX
AC   ABC68529;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 68546 for detecting SNP TSC0017868.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 68546; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 3 C; 0 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCA 83
              ||||||||||
Db          1 AAATTATACCA 11
```

```
RESULT 141
ABF39158/c
ID   ABF39158 standard; DNA; 13 BP.
XX
AC   ABF39158;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 139155 for detecting SNP TSC0034856.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 139155; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 2 G; 6 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         30 ATCTATCTAAA 40
              ||||||||||
Db         12 ATCTATCTAAA 2


RESULT 142
ABH36296/c
ID   ABH36296 standard; DNA; 13 BP.
XX
AC   ABH36296;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 236273 for detecting SNP TSC0008120.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 236273; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 4 G; 4 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         46 AACCTCTCTAGTA 58
              :|||||||| ||
Db         13 RACCTCTCTAATA 1


RESULT 143
ABF64310
ID   ABF64310 standard; DNA; 13 BP.
XX
AC   ABF64310;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 164307 for detecting SNP TSC0041255.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
```

```
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 164307; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 5 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 GAGTATAAGGT 15
              ||||||||||
Db          1 GAGTATAAGGT 11


RESULT 144
ABF64315/c
ID   ABF64315 standard; DNA; 13 BP.
XX
AC   ABF64315;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 164312 for detecting SNP TSC0041255.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 164312; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 3 A; 5 C; 1 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 GAGTATAAGGT 15
              ||||||||||
Db          13 GAGTATAAGGT 3


RESULT 145
ABC44376/c
ID   ABC44376 standard; DNA; 13 BP.
XX
AC   ABC44376;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 44393 for detecting SNP TSC0013032.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 44393; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 2 G; 7 T; 0 U; 0 Other;
```

```
  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity  100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCA 83
              ||||||||||
Db         11 AAATTATACCA 1


RESULT 146
ABH37001
ID   ABH37001 standard; DNA; 13 BP.
XX
AC   ABH37001;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 236978 for detecting SNP TSC0057815.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 236978; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 1 C; 0 G; 5 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         27 GTAATCTATCTAA 39
              :|||||||| |||
Db          1 RTAATCTATATAA 13


RESULT 147
ABH37265
ID   ABH37265 standard; DNA; 13 BP.
XX
AC   ABH37265;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 237242 for detecting SNP TSC0057862.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 237242; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 7 A; 2 C; 0 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity  100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         30 ATCTATCTAAA 40
              ||||||||||
Db          1 ATCTATCTAAA 11


RESULT 148
ABF23810/c
ID   ABF23810 standard; DNA; 13 BP.
XX
AC   ABF23810;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 123807 for detecting SNP TSC0030951.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
```

```
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 123807; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 3 A; 1 C; 4 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        115 CCTAACGACTA 125
              ||||||||||
Db         12 CCTAACGACTA 2


RESULT 149
ABH19270/c
ID   ABH19270 standard; DNA; 13 BP.
XX
AC   ABH19270;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 219247 for detecting SNP TSC0053308.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 219247; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 2 G; 7 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCA 83
              ||||||||||
Db         12 AAATTATACCA 2


RESULT 150
ABF36568/c
ID   ABF36568 standard; DNA; 13 BP.
XX
AC   ABF36568;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 136565 for detecting SNP TSC0034129.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 136565; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
```

```
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 0 C; 2 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         30 ATCTATCTAAA 40
              ||||||||||
Db         13 ATCTATCTAAA 3


RESULT 151
ABF36569
ID   ABF36569 standard; DNA; 13 BP.
XX
AC   ABF36569;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 136566 for detecting SNP TSC0034129.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 136566; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 2 C; 0 G; 6 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         30 ATCTATCTAAA 40
              ||||||||||
Db         1 ATCTATCTAAA 11


RESULT 152
ABH22530
ID   ABH22530 standard; DNA; 13 BP.
XX
AC   ABH22530;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 222507 for detecting SNP TSC0054138.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 222507; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 4 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          6 AGTATAAGGTG 16
              ||||||||||
Db          1 AGTATAAGGTG 11


RESULT 153
ABC44377
ID   ABC44377 standard; DNA; 13 BP.
XX
AC   ABC44377;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 44394 for detecting SNP TSC0013032.
```

```
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 44394; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 7 A; 2 C; 0 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCA 83
              ||||||||||
Db          3 AAATTATACCA 13


RESULT 154
ABC88333/c
ID   ABC88333 standard; DNA; 13 BP.
XX
AC   ABC88333;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 88350 for detecting SNP TSC0022204.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 88350; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 7 A; 1 C; 0 G; 4 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         20 TATACTTGTAATC 32
              |||| |||||||:
Db         13 TATATTTGTAATY 1


RESULT 155
ABH17450
ID   ABH17450 standard; DNA; 13 BP.
XX
AC   ABH17450;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 217427 for detecting SNP TSC0052875.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 217427; 29pp + Sequence Listing; German.
```

```
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 3 G; 4 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          6 AGTATAAGGTGAC 18
              |||||||| |||:
Db          1 AGTATAAGTTGAY 13


RESULT 156
ABF69632/c
ID   ABF69632 standard; DNA; 13 BP.
XX
AC   ABF69632;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 169629 for detecting SNP TSC0042370.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 169629; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 2 G; 6 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         29 AATCTATCTAA 39
              ||||||||||
Db         11 AATCTATCTAA 1


RESULT 157
ABH03009
ID   ABH03009 standard; DNA; 13 BP.
XX
AC   ABH03009;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 202986 for detecting SNP TSC0049850.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 202986; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 3 C; 0 G; 4 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCAGC 85
              :|||||||||| |
Db          1 RAATTATACCATC 13


RESULT 158
```

```
ABF17818/c
ID   ABF17818 standard; DNA; 13 BP.
XX
AC   ABF17818;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 117815 for detecting SNP TSC0029452.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 117815; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 0 C; 2 G; 4 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         16 GACTTATACTTGT 28
              :|||||||||| |
Db         13 RACTTATACTTAT 1


RESULT 159
ABF46247
ID   ABF46247 standard; DNA; 13 BP.
XX
AC   ABF46247;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 146244 for detecting SNP TSC0036845.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 146244; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 2 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         28 TAATCTATCTA 38
              ||||||||||
Db          3 TAATCTATCTA 13


RESULT 160
ABC68528/c
ID   ABC68528 standard; DNA; 13 BP.
XX
AC   ABC68528;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 68545 for detecting SNP TSC0017868.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
```

```
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 68545; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 3 G; 6 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCA 83
              ||||||||||
Db         13 AAATTATACCA 3


RESULT 161
ABC29301
ID   ABC29301 standard; DNA; 13 BP.
XX
AC   ABC29301;
XX
DT   20-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 29318 for detecting SNP TSC0008650.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 29318; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 5 C; 0 G; 3 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        114 GCCTAACGACTAT 126
              :|||||| |||||
Db          1 RCCTAACCACTAT 13


RESULT 162
ABF23811
ID   ABF23811 standard; DNA; 13 BP.
XX
AC   ABF23811;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 123808 for detecting SNP TSC0030951.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 123808; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 4 C; 1 G; 3 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
```

```
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy        115 CCTAACGACTA 125
              ||||||||||
Db          2 CCTAACGACTA 12


RESULT 163
ABH10657/c
ID   ABH10657 standard; DNA; 13 BP.
XX
AC   ABH10657;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 210634 for detecting SNP TSC0051423.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 210634; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 1 C; 0 G; 5 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         20 TATACTTGTAATC 32
              |||| |||||||:
Db         13 TATAATTGTAATY 1


RESULT 164
ABF64314
ID   ABF64314 standard; DNA; 13 BP.
XX
AC   ABF64314;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 164311 for detecting SNP TSC0041255.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 164311; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 1 C; 5 G; 3 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 GAGTATAAGGT 15
              ||||||||||
Db          1 GAGTATAAGGT 11


RESULT 165
ABC29300/c
ID   ABC29300 standard; DNA; 13 BP.
XX
AC   ABC29300;
XX
DT   20-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 29317 for detecting SNP TSC0008650.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
```

```
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 29317; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 3 A; 0 C; 5 G; 4 T; 0 U; 1 Other;

  Query Match              8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        114 GCCTAACGACTAT 126
              :|||||| |||||
Db         13 RCCTAACCACTAT 1


RESULT 166
ABC88332
ID   ABC88332 standard; DNA; 13 BP.
XX
AC   ABC88332;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 88349 for detecting SNP TSC0022204.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 88349; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 1 G; 7 T; 0 U; 1 Other;

  Query Match              8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         20 TATACTTGTAATC 32
              |||| |||||||:
Db          1 TATATTTGTAATY 13


RESULT 167
ABF23105
ID   ABF23105 standard; DNA; 13 BP.
XX
AC   ABF23105;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 123102 for detecting SNP TSC0030780.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 123102; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
```

```
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 3 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         31 TCTATCTAAAC 41
              ||||||||||
Db          1 TCTATCTAAAC 11


RESULT 168
ABF29060/c
ID   ABF29060 standard; DNA; 13 BP.
XX
AC   ABF29060;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 129057 for detecting SNP TSC0032308.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 129057; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 0 C; 3 G; 4 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         31 TCTATCTAAAC 41
              ||||||||||
Db         13 TCTATCTAAAC 3


RESULT 169
ABF39159
ID   ABF39159 standard; DNA; 13 BP.
XX
AC   ABF39159;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 139156 for detecting SNP TSC0034856.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 139156; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 2 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         30 ATCTATCTAAA 40
              ||||||||||
Db          2 ATCTATCTAAA 12


RESULT 170
ABH17451/c
ID   ABH17451 standard; DNA; 13 BP.
XX
AC   ABH17451;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 217428 for detecting SNP TSC0052875.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
```

KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 217428; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 4 A; 3 C; 0 G; 5 T; 0 U; 1 Other;

Query Match 8.4%; Score 11; DB 1; Length 13;
Best Local Similarity 84.6%; Pred. No. 1.3e+02;
Matches 11; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 6 AGTATAAGGTGAC 18
||||||| |||:
Db 13 AGTATAAGTTGAY 1

RESULT 171
ABH19271
ID ABH19271 standard; DNA; 13 BP.
XX
AC ABH19271;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 219248 for detecting SNP TSC0053308.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 219248; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 7 A; 2 C; 0 G; 4 T; 0 U; 0 Other;

Query Match 8.4%; Score 11; DB 1; Length 13;
Best Local Similarity 100.0%; Pred. No. 1.3e+02;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 73 AAATTATACCA 83
||||||||||
Db 2 AAATTATACCA 12

RESULT 172
ABF69633
ID ABF69633 standard; DNA; 13 BP.
XX
AC ABF69633;
XX
DT 22-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 169630 for detecting SNP TSC0042370.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 169630; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic

```
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 6 A; 2 C; 0 G; 5 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         29 AATCTATCTAA 39
              ||||||||||
Db          3 AATCTATCTAA 13


RESULT 173
ABF69721
ID   ABF69721 standard; DNA; 13 BP.
XX
AC   ABF69721;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 169718 for detecting SNP TSC0042390.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 169718; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 4 C; 0 G; 4 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         70 GCTAAATTATACC 82
              :|||||| ||||
Db          1 RCTAAATTCTACC 13


RESULT 174
ABF57604/c
ID   ABF57604 standard; DNA; 13 BP.
XX
AC   ABF57604;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 157601 for detecting SNP TSC0039698.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 157601; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 2 G; 7 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCA 83
              ||||||||||
Db         13 AAATTATACCA 3


RESULT 175
ABH37000/c
ID   ABH37000 standard; DNA; 13 BP.
```

```
XX
AC   ABH37000;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 236977 for detecting SNP TSC0057815.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 236977; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 1 G; 6 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         27 GTAATCTATCTAA 39
              :||||||||  |||
Db         13 RTAATCTATATAA 1


RESULT 176
ABF05685
ID   ABF05685 standard; DNA; 13 BP.
XX
AC   ABF05685;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 105682 for detecting SNP TSC0026488.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 105682; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 2 C; 0 G; 6 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         72 TAAATTATACC 82
              ||||||||||
Db          2 TAAATTATACC 12


RESULT 177
ABC87293/c
ID   ABC87293 standard; DNA; 13 BP.
XX
AC   ABC87293;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 87310 for detecting SNP TSC0021951.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
```

XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 87310; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 3 A; 5 C; 0 G; 5 T; 0 U; 0 Other;

Query Match 8.4%; Score 11; DB 1; Length 13;
Best Local Similarity 100.0%; Pred. No. 1.3e+02;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 5 GAGTATAAGGT 15
||||||||||
Db 11 GAGTATAAGGT 1

RESULT 178
ABF16584
ID ABF16584 standard; DNA; 13 BP.
XX
AC ABF16584;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 116581 for detecting SNP TSC0029177.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 116581; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 4 A; 0 C; 6 G; 3 T; 0 U; 0 Other;

Query Match 8.4%; Score 11; DB 1; Length 13;
Best Local Similarity 100.0%; Pred. No. 1.3e+02;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 5 GAGTATAAGGT 15
||||||||||
Db 3 GAGTATAAGGT 13

RESULT 179
ABF29061
ID ABF29061 standard; DNA; 13 BP.
XX
AC ABF29061;
XX
DT 21-FEB-2002 (first entry)
XX
DE Oligonucleotide SEQ ID NO 129058 for detecting SNP TSC0032308.
XX
KW SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS Homo sapiens.
XX
PN WO200177384-A2.
XX
PD 18-OCT-2001.
XX
PF 06-APR-2001; 2001WO-IB000713.
XX
PR 07-APR-2000; 2000DE-01019173.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2001-657177/75.
XX
PT Set of oligonucleotides, useful for diagnosis and cell typing, is
PT designed to detect single-nucleotide polymorphisms and cytosine
PT methylation status.
XX
PS Claim 1; SEQ ID NO 129058; 29pp + Sequence Listing; German.
XX
CC This invention describes novel oligonucleotide primers or peptide nucleic
CC acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC and cytosine methylation status in chemically pretreated genomic DNA. The
CC oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC range of diseases including immune system, gastrointestinal, respiratory,
CC central nervous system, cardiovascular and metabolic disorders. The
CC oligomers are also used for detecting cell type differentiation. ABC00010
CC -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC represent the oligomers described in the invention. NOTE: The sequence
CC data for this patent did not form part of the printed specification, but
CC was obtained in electronic format from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 13 BP; 4 A; 3 C; 0 G; 6 T; 0 U; 0 Other;

Query Match 8.4%; Score 11; DB 1; Length 13;
Best Local Similarity 100.0%; Pred. No. 1.3e+02;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          31 TCTATCTAAAC 41
               ||||||||||
Db           1 TCTATCTAAAC 11


RESULT 180
ABF31690/c
ID   ABF31690 standard; DNA; 13 BP.
XX
AC   ABF31690;
XX
DT   21-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 131687 for detecting SNP TSC0032867.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 131687; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 5 A; 0 C; 2 G; 6 T; 0 U; 0 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          73 AAATTATACCA 83
               ||||||||||
Db          13 AAATTATACCA 3


RESULT 181
ABF69720/c
ID   ABF69720 standard; DNA; 13 BP.
XX
AC   ABF69720;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 169717 for detecting SNP TSC0042390.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 169717; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 0 C; 4 G; 4 T; 0 U; 1 Other;

  Query Match             8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          70 GCTAAATTATACC 82
               :||||||| ||||
Db          13 RCTAAATTCTACC 1


RESULT 182
ABH36297
ID   ABH36297 standard; DNA; 13 BP.
XX
AC   ABH36297;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 236274 for detecting SNP TSC0008120.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
```

```
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 236274; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 4 C; 0 G; 4 T; 0 U; 1 Other;

  Query Match              8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         46 AACCTCTCTAGTA 58
              :|||||||||| ||
Db          1 RACCTCTCTAATA 13


RESULT 183
ABF64311/c
ID   ABF64311 standard; DNA; 13 BP.
XX
AC   ABF64311;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide SEQ ID NO 164308 for detecting SNP TSC0041255.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A,  Piepenbrock C,  Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 164308; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 13 BP; 4 A; 5 C; 0 G; 4 T; 0 U; 0 Other;

  Query Match              8.4%;  Score 11;  DB 1;  Length 13;
  Best Local Similarity  100.0%;  Pred. No. 1.3e+02;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 GAGTATAAGGT 15
              ||||||||||
Db         13 GAGTATAAGGT 3


Search completed: December  9, 2004, 17:22:30
Job time : 1 secs
```

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: December 9, 2004, 17:25:16 ; Search time 0.001 Seconds
(without alignments)
127.594 Million cell updates/sec

Title: us-09-661-658-2
Perfect score: 131
Sequence: 1 gcctgagtataaggtgactt.....atgcctaacgactatcccttt 131

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

Searched: 27 seqs, 487 residues

Total number of hits satisfying chosen parameters: 54

Minimum DB seq length: 8
Maximum DB seq length: 100

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 27 summaries

Database : rnidb:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	31.8	24.3	40	1	US-09-857-063-1	Sequence 1, Appli
2	31.8	24.3	42	1	US-08-443-957-29	Sequence 29, Appl
3	30.4	23.2	38	1	US-08-443-957-37	Sequence 37, Appl
4	30.4	23.2	40	1	US-08-443-957-6	Sequence 6, Appli
c 5	12.4	9.5	15	1	US-08-319-492B-449	Sequence 449, App
c 6	12	9.2	12	1	US-09-164-249B-16	Sequence 16, Appl
c 7	11.8	9.0	15	1	US-08-182-968A-491	Sequence 491, App
c 8	11.8	9.0	15	1	US-08-774-306A-491	Sequence 491, App
c 9	11.8	9.0	15	1	US-09-064-156A-491	Sequence 491, App
10	11.8	9.0	15	1	US-09-081-646-677	Sequence 677, App
c 11	11.4	8.7	15	1	US-08-291-932A-188	Sequence 188, App
c 12	11.4	8.7	15	1	US-08-334-847-90	Sequence 90, Appl
c 13	11.4	8.7	15	1	US-08-334-847-91	Sequence 91, Appl
c 14	11.4	8.7	15	1	US-08-585-684B-793	Sequence 793, App
c 15	11.4	8.7	15	1	US-08-585-684B-794	Sequence 794, App
c 16	11.4	8.7	15	1	US-09-038-073-793	Sequence 793, App
c 17	11.4	8.7	15	1	US-09-038-073-794	Sequence 794, App
c 18	11.4	8.7	15	1	US-09-081-646-662	Sequence 662, App
19	10.8	8.2	14	1	US-08-453-224-7	Sequence 7, Appli
20	10.8	8.2	14	1	US-08-379-079-7	Sequence 7, Appli
21	10.8	8.2	14	1	US-08-802-384-7	Sequence 7, Appli
22	10.8	8.2	14	1	US-09-302-390-7	Sequence 7, Appli
23	10.8	8.2	14	1	PCT-US94-05181-7	Sequence 7, Appli
c 24	10.4	7.9	13	1	5171840-9	Patent No. 5171840
25	10	7.6	11	1	US-08-520-194-6	Sequence 6, Appli
26	9.8	7.5	13	1	US-08-259-148A-54	Sequence 54, Appl
27	9.8	7.5	13	1	US-07-876-941A-70	Sequence 70, Appl

ALIGNMENTS

RESULT 1

US-09-857-063-1
; Sequence 1, Application US/09857063
; Patent No. 6579681
; GENERAL INFORMATION:
; APPLICANT: Huls, Christoph
; APPLICANT: Bauer, Bettina
; APPLICANT: Simandi, Claus
; APPLICANT: Luhrmann, Reinhard
; APPLICANT: Achsel, Tilmann
; APPLICANT: Vornlocher, Hans-Peter
; TITLE OF INVENTION: Test System for Detecting a Splicing Reaction and Use Thereof
; FILE REFERENCE: 199at.01.us (8602*34)
; CURRENT APPLICATION NUMBER: US/09/857,063
; CURRENT FILING DATE: 2001-08-29
; PRIOR APPLICATION NUMBER: PCT/EP00/01595
; PRIOR FILING DATE: 2000-02-25
; PRIOR APPLICATION NUMBER: DE 199 09 156.0
; PRIOR FILING DATE: 1999-03-02
; NUMBER OF SEQ ID NOS: 27
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 40
; TYPE: RNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Aptamer
US-09-857-063-1

Query Match 24.3%; Score 31.8; DB 1; Length 40;
Best Local Similarity 68.6%; Pred. No. 0.3;
Matches 24; Conservative 9; Mismatches 2; Indels 0; Gaps 0;

```
Qy          73 AAATTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
               || : |:|||||||:||:|::||:||||::|||||
Db           1 AAGUGAUACCAGCAUCGUCUUGAUGCCCUUGGCAG 35
```

RESULT 2
US-08-443-957-29
; Sequence 29, Application US/08443957
; Patent No. 5580737
; GENERAL INFORMATION:
; APPLICANT: Barry Polisky
; APPLICANT: Robert Jenison
; APPLICANT: Larry Gold
; TITLE OF INVENTION: HIGH-AFFINITY NUCLEIC ACID LIGANDS THAT
; TITLE OF INVENTION: DISCRIMINATE BETWEEN THEOPHYLLINE AND
; TITLE OF INVENTION: CAFFEINE
; NUMBER OF SEQUENCES: 37
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Swanson & Bratschun, L.L.C.
; STREET: 8400 E. Prentice Avenue, Suite 200
; CITY: Englewood
; STATE: Colorado
; COUNTRY: USA
; ZIP: 80111
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 3.5 inch, 800 Kb storage
; COMPUTER: IBM
; OPERATING SYSTEM: MS-DOS
; SOFTWARE: WordPerfect 5.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/443,957
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/134,028
; FILING DATE: 10 OCTOBER 1993
; APPLICATION NUMBER: 07/714,131
; FILING DATE: 10-JUNE-1991
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/536,428
; FILING DATE: 11-JUNE-1990

```
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX11
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  29:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  42 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-443-957-29

  Query Match             24.3%;  Score 31.8;  DB 1;  Length 42;
  Best Local Similarity   68.6%;  Pred. No. 0.31;
  Matches   24;  Conservative    9;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         73 AAATTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
              || : |:|||||||:||:|::||:||||::|||||
Db          1 AAGUGAUACCAGCAUCGUCUUGAUGCCCUUGGCAG 35


RESULT 3
US-08-443-957-37
; Sequence 37, Application US/08443957
; Patent No. 5580737
;  GENERAL INFORMATION:
;    APPLICANT:  Barry Polisky
;    APPLICANT:  Robert Jenison
;    APPLICANT:  Larry Gold
;    TITLE OF INVENTION:  HIGH-AFFINITY NUCLEIC ACID LIGANDS THAT
;    TITLE OF INVENTION:  DISCRIMINATE BETWEEN THEOPHYLLINE AND
;    TITLE OF INVENTION:  CAFFEINE
;    NUMBER OF SEQUENCES:  37
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3.5 inch, 800 Kb storage
;      COMPUTER:  IBM
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/443,957
;      FILING DATE:
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/134,028
;      FILING DATE:  10 OCTOBER 1993
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX11
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  37:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  38 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-443-957-37

  Query Match             23.2%;  Score 30.4;  DB 1;  Length 38;
  Best Local Similarity   68.8%;  Pred. No. 0.4;
  Matches   22;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         76 TTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
              : |:|||||||:||:|::||:||||::|||||
Db          3 UGAUACCAGCAUCGUCUUGAUGCCCUUGGCAG 34


RESULT 4
US-08-443-957-6
; Sequence 6, Application US/08443957
; Patent No. 5580737
;  GENERAL INFORMATION:
;    APPLICANT:  Barry Polisky
;    APPLICANT:  Robert Jenison
;    APPLICANT:  Larry Gold
;    TITLE OF INVENTION:  HIGH-AFFINITY NUCLEIC ACID LIGANDS THAT
;    TITLE OF INVENTION:  DISCRIMINATE BETWEEN THEOPHYLLINE AND
;    TITLE OF INVENTION:  CAFFEINE
;    NUMBER OF SEQUENCES:  37
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Swanson & Bratschun, L.L.C.
;      STREET:  8400 E. Prentice Avenue, Suite 200
;      CITY:  Englewood
;      STATE:  Colorado
;      COUNTRY:  USA
;      ZIP:  80111
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3.5 inch, 800 Kb storage
;      COMPUTER:  IBM
;      OPERATING SYSTEM:  MS-DOS
;      SOFTWARE:  WordPerfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/443,957
;      FILING DATE:
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/134,028
;      FILING DATE:  10 OCTOBER 1993
;      APPLICATION NUMBER:  07/714,131
;      FILING DATE:  10-JUNE-1991
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/536,428
;      FILING DATE:  11-JUNE-1990
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Barry J. Swanson
;      REGISTRATION NUMBER:  33,215
;      REFERENCE/DOCKET NUMBER:  NEX11
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (303) 793-3333
;      TELEFAX:  (303) 793-3433
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  40 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-443-957-6

  Query Match             23.2%;  Score 30.4;  DB 1;  Length 40;
  Best Local Similarity   68.8%;  Pred. No. 0.42;
  Matches   22;  Conservative    9;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         76 TTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
              : |:|||||||:||:|::||:||||::|||||
Db          2 UGAUACCAGCAUCGUCUUGAUGCCCUUGGCAG 33


RESULT 5
US-08-319-492B-449/c
```

```
; Sequence 449, Application US/08319492B
; Patent No. 5616488
;  GENERAL INFORMATION:
;    APPLICANT:  Sullivan, Sean M.
;    APPLICANT:  Draper, Kenneth G.
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Stinchcomb, Dan T.
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF DISEASES
;    TITLE OF INVENTION:  OR CONDITIONS RELATED TO LEVELS
;    TITLE OF INVENTION:  OF IL-5
;    NUMBER OF SEQUENCES:  751
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/319,492B
;      FILING DATE:  October 7, 1994
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                Two
;      APPLICATION NUMBER:  08/008,895
;      FILING DATE:  January 19, 1993
;      APPLICATION NUMBER:  07/989,849
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/276
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  449:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-319-492B-449

  Query Match             9.5%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 13;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         31 TCTATCTAAACGGG 44
               ||||||||| |||
Db         15 TCTATCTAAAGGGG 2


RESULT 6
US-09-164-249B-16/c
; Sequence 16, Application US/09164249B
; Patent No. 6322971
; GENERAL INFORMATION:
;  APPLICANT: Chetverin, Alexander B.
;  APPLICANT:  Kramer, Fred Russel
;  TITLE OF INVENTION: NOVEL OLIGONUCLEOTIDE ARRAYS AND THEIR USE FOR SORTING,
;  TITLE OF INVENTION:  ISOLATING, SEQUENCING, AND MANIPULATING NUCLEIC ACIDS
;  FILE REFERENCE: 07763-004003
;  CURRENT APPLICATION NUMBER: US/09/164,249B
;  CURRENT FILING DATE:  1998-09-30
;  PRIOR APPLICATION NUMBER: US 08/473,010
;  PRIOR FILING DATE: 1995-06-07
;  PRIOR APPLICATION NUMBER: US 08/247,530
;  PRIOR FILING DATE: 1994-05-23
;  PRIOR APPLICATION NUMBER: US 07/838,607
;  PRIOR FILING DATE: 1992-02-19
;  NUMBER OF SEQ ID NOS: 18
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 16
;   LENGTH: 12
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetically derived DNA
US-09-164-249B-16

  Query Match             9.2%;  Score 12;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 12;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         76 TTATACCAGCAT 87
               ||||||||||||
Db         12 TTATACCAGCAT 1


RESULT 7
US-08-182-968A-491/c
; Sequence 491, Application US/08182968A
; Patent No. 5610054
;  GENERAL INFORMATION:
;    APPLICANT:  Draper, Kenneth G.
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR
;    TITLE OF INVENTION:  INHIBITING HEPATITIS C
;    TITLE OF INVENTION:  VIRUS REPLICATION
;    NUMBER OF SEQUENCES:  497
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/182,968A
;      FILING DATE:  13-JANUARY-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  07/882,888
;      FILING DATE:  14-MAY-1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  205/277
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  491:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-182-968A-491

  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 15;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;
```

```
Qy        104 GCAGATAAATGCCTA 118
              |||| || |||||||
Db         15 GCAGGTAGATGCCTA 1


RESULT 8
US-08-774-306A-491/c
; Sequence 491, Application US/08774306A
; Patent No. 5869253
;  GENERAL INFORMATION:
;    APPLICANT:  Draper, Kenneth G.
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR
;    TITLE OF INVENTION:  INHIBITING HEPATITIS C
;    TITLE OF INVENTION:  VIRUS REPLICATION
;    NUMBER OF SEQUENCES:  497
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/774,306A
;      FILING DATE:  December 26, 1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/182,968
;      FILING DATE:  January 13, 1994
;      APPLICATION NUMBER:  07/882,888
;      FILING DATE:  May 14, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  223/227
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  491:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-774-306A-491

  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 15;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        104 GCAGATAAATGCCTA 118
              |||| || |||||||
Db         15 GCAGGTAGATGCCTA 1


RESULT 9
US-09-064-156A-491/c
; Sequence 491, Application US/09064156A
; Patent No. 6132966
;  GENERAL INFORMATION:
;    APPLICANT:  Draper, Kenneth G.
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR
;    TITLE OF INVENTION:  INHIBITING HEPATITIS C
;    TITLE OF INVENTION:  VIRUS REPLICATION
;    NUMBER OF SEQUENCES:  498
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/064,156A
;      FILING DATE:  April 21, 1998
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/774,306
;      FILING DATE:  December 26, 1996
;      APPLICATION NUMBER:  08/182,968
;      FILING DATE:  January 13, 1994
;      APPLICATION NUMBER:  07/882,888
;      FILING DATE:  May 14, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  234/083
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  491:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-09-064-156A-491

  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 15;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        104 GCAGATAAATGCCTA 118
              |||| || |||||||
Db         15 GCAGGTAGATGCCTA 1


RESULT 10
US-09-081-646-677
; Sequence 677, Application US/09081646
; Patent No. 6333152
; GENERAL INFORMATION:
;  APPLICANT: Kinzler, Kenneth
;  APPLICANT: Vogelstein, Bert
;  APPLICANT: Zhang, Lin
;  APPLICANT: Zhou, Wei
;  TITLE OF INVENTION: Gene Expression Profiles in No. 6333152mal and
;  TITLE OF INVENTION: Cancer Cells
;  FILE REFERENCE: 01107.74664
;  CURRENT APPLICATION NUMBER: US/09/081,646
;  CURRENT FILING DATE: 1998-05-20
;  EARLIER APPLICATION NUMBER: 60/047,352
;  EARLIER FILING DATE: 1997-05-21
;  NUMBER OF SEQ ID NOS: 871
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 677
;   LENGTH: 15
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-09-081-646-677
```

```
  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 15;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         85 CATCGTCTTGATGCC 99
              ||| ||||||| |||
Db          1 CATGGTCTTGAAGCC 15


RESULT 11
US-08-291-932A-188/c
; Sequence 188, Application US/08291932A
; Patent No. 5658780
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Dan T.
;    APPLICANT:  Draper, Kenneth G.
;    APPLICANT:  McSwiggen, James
;    TITLE OF INVENTION:  RIBOZYME TREATMENT OF
;    TITLE OF INVENTION:  DISEASES OR CONDITIONS
;    TITLE OF INVENTION:  RELATED TO LEVELS OF
;    TITLE OF INVENTION:  NF-KB
;    NUMBER OF SEQUENCES:  830
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/291,932A
;      FILING DATE:  August 15, 1994
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;    PRIOR APPLICATION DATA:  including application
;    PRIOR APPLICATION DATA:  described below:                    Two
;      APPLICATION NUMBER:  08/245,466
;      FILING DATE:  May 18, 1994
;      APPLICATION NUMBER:  07/987,132
;      FILING DATE:  December 7, 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  208/157
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  188:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-291-932A-188

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 17;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         48 CCTCTCTAGTAGA 60
              ||||||||| |||
Db         14 CCTCTCTAGGAGA 2


RESULT 12
US-08-334-847-90/c
; Sequence 90, Application US/08334847
; Patent No. 5693532
;  GENERAL INFORMATION:
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Draper, Kenneth
;    APPLICANT:  Pavco, Pam
;    APPLICANT:  Woolf, Tod
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR
;    TITLE OF INVENTION:  INHIBITING RESPIRATORY
;    TITLE OF INVENTION:  SYNCYTIAL VIRUS
;    NUMBER OF SEQUENCES:  909
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071-2066
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/334,847
;      FILING DATE:  No. 5693532ember 4, 1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard J.
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  209/032
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  90:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-334-847-90

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 17;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         52 TCTAGTAGACAAT 64
              |||||||||| ||
Db         15 TCTAGTAGACCAT 3


RESULT 13
US-08-334-847-91/c
; Sequence 91, Application US/08334847
; Patent No. 5693532
;  GENERAL INFORMATION:
;    APPLICANT:  McSwiggen, James
;    APPLICANT:  Draper, Kenneth
;    APPLICANT:  Pavco, Pam
;    APPLICANT:  Woolf, Tod
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR
;    TITLE OF INVENTION:  INHIBITING RESPIRATORY
;    TITLE OF INVENTION:  SYNCYTIAL VIRUS
;    NUMBER OF SEQUENCES:  909
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
```

```
;       STREET:  Suite 4700
;       CITY:  Los Angeles
;       STATE:  California
;       COUNTRY:  U.S.A.
;       ZIP:  90071-2066
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;       MEDIUM TYPE:  storage
;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  IBM P.C. DOS 5.0
;       SOFTWARE:  Word Perfect 5.1
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/334,847
;       FILING DATE:  No. 5693532ember 4, 1994
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:
;       FILING DATE:
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Warburg, Richard J.
;       REGISTRATION NUMBER:  32,327
;       REFERENCE/DOCKET NUMBER:  209/032
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (213) 489-1600
;       TELEFAX:  (213) 955-0440
;       TELEX:  67-3510
;   INFORMATION FOR SEQ ID NO:  91:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  15 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
US-08-334-847-91

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 17;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         52 TCTAGTAGACAAT 64
              |||||||||| ||
Db         13 TCTAGTAGACCAT 1


RESULT 14
US-08-585-684B-793/c
; Sequence 793, Application US/08585684B
; Patent No. 5877021
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Daniel T.
;    APPLICANT:  Jarvis, Thale
;    APPLICANT:  McSwiggen, James
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR THE
;    TITLE OF INVENTION:  INDUCTION OF GRAFT TOLERANCE
;    TITLE OF INVENTION:  AND REVERSAL OF IMMUNE RESPONSES
;    NUMBER OF SEQUENCES:  2751
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/585,684B
;      FILING DATE:  January 16, 1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/000,951
;      FILING DATE:  July 7, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  218/078
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  793:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-585-684B-793

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 17;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         87 TCGTCTTGATGCC 99
              |||| ||||||||
Db         15 TCGTATTGATGCC 3


RESULT 15
US-08-585-684B-794/c
; Sequence 794, Application US/08585684B
; Patent No. 5877021
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Daniel T.
;    APPLICANT:  Jarvis, Thale
;    APPLICANT:  McSwiggen, James
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR THE
;    TITLE OF INVENTION:  INDUCTION OF GRAFT TOLERANCE
;    TITLE OF INVENTION:  AND REVERSAL OF IMMUNE RESPONSES
;    NUMBER OF SEQUENCES:  2751
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/585,684B
;      FILING DATE:  January 16, 1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/000,951
;      FILING DATE:  July 7, 1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  218/078
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  794:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-08-585-684B-794
```

```
  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 17;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         87 TCGTCTTGATGCC 99
               |||| ||||||||
Db         15 TCGTATTGATGCC 3


RESULT 16
US-09-038-073-793/c
; Sequence 793, Application US/09038073
; Patent No. 6194150
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Daniel T.
;    APPLICANT:  Jarvis, Thale
;    APPLICANT:  McSwiggen, James
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR THE
;    TITLE OF INVENTION:  INDUCTION OF GRAFT TOLERANCE
;    TITLE OF INVENTION:  AND REVERSAL OF IMMUNE RESPONSES
;    NUMBER OF SEQUENCES:  2751
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/038,073
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/585,684
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  218/078
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  793:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-09-038-073-793

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 17;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         87 TCGTCTTGATGCC 99
               |||| ||||||||
Db         15 TCGTATTGATGCC 3


RESULT 17
US-09-038-073-794/c
; Sequence 794, Application US/09038073
; Patent No. 6194150
;  GENERAL INFORMATION:
;    APPLICANT:  Stinchcomb, Daniel T.
;    APPLICANT:  Jarvis, Thale
;    APPLICANT:  McSwiggen, James
;    TITLE OF INVENTION:  METHOD AND REAGENT FOR THE
;    TITLE OF INVENTION:  INDUCTION OF GRAFT TOLERANCE
;    TITLE OF INVENTION:  AND REVERSAL OF IMMUNE RESPONSES
;    NUMBER OF SEQUENCES:  2751
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Lyon & Lyon
;      STREET:  633 West Fifth Street
;      STREET:  Suite 4700
;      CITY:  Los Angeles
;      STATE:  California
;      COUNTRY:  U.S.A.
;      ZIP:  90071
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  3.5" Diskette, 1.44 Mb
;      MEDIUM TYPE:  storage
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  IBM P.C. DOS 5.0
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/038,073
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/585,684
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Warburg, Richard
;      REGISTRATION NUMBER:  32,327
;      REFERENCE/DOCKET NUMBER:  218/078
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (213) 489-1600
;      TELEFAX:  (213) 955-0440
;      TELEX:  67-3510
;  INFORMATION FOR SEQ ID NO:  794:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  15 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
US-09-038-073-794

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 17;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         87 TCGTCTTGATGCC 99
               |||| ||||||||
Db         15 TCGTATTGATGCC 3


RESULT 18
US-09-081-646-662/c
; Sequence 662, Application US/09081646
; Patent No. 6333152
; GENERAL INFORMATION:
;  APPLICANT: Kinzler, Kenneth
;  APPLICANT: Vogelstein, Bert
;  APPLICANT: Zhang, Lin
;  APPLICANT: Zhou, Wei
;  TITLE OF INVENTION: Gene Expression Profiles in No. 6333152mal and
;  TITLE OF INVENTION: Cancer Cells
;  FILE REFERENCE: 01107.74664
;  CURRENT APPLICATION NUMBER: US/09/081,646
;  CURRENT FILING DATE: 1998-05-20
;  EARLIER APPLICATION NUMBER: 60/047,352
;  EARLIER FILING DATE: 1997-05-21
;  NUMBER OF SEQ ID NOS: 871
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 662
;   LENGTH: 15
;   TYPE: DNA
;   ORGANISM: Homo sapiens
```

```
US-09-081-646-662

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 17;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         58 AGACAATCCCGTG 70
               |||||||||| ||
Db         13 AGACAATCCCATG 1


RESULT 19
US-08-453-224-7
; Sequence 7, Application US/08453224
; Patent No. 5627274
;  GENERAL INFORMATION:
;    APPLICANT:  Kole, Ryszard
;    APPLICANT:  Dominski, Zbigniew T.
;    TITLE OF INVENTION:  Antisense Oligonucleotides Which Combat
;    TITLE OF INVENTION:  Aberrant Splicing and Methods of Using the Same
;    NUMBER OF SEQUENCES:  7
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Kenneth D. Sibley; Bell, Seltzer, Park and
;      ADDRESSEE:  Gibson
;      STREET:  Post Office Drawer 34009
;      CITY:  Charlotte
;      STATE:  No. 5627274th Carolina
;      COUNTRY:  U.S.A.
;      ZIP:  28234
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/453,224
;      FILING DATE:  30-MAY-1995
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/379,079
;      FILING DATE:  26-JAN-1995
;      APPLICATION NUMBER:  US/08/062,471
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Sibley, Kenneth D.
;      REGISTRATION NUMBER:  31,665
;      REFERENCE/DOCKET NUMBER:  5470-63
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  919-881-3140
;      TELEFAX:  919-881-3175
;      TELEX:  575102
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  14 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  RNA (genomic)
;    ANTI-SENSE:  YES
US-08-453-224-7

  Query Match             8.2%;  Score 10.8;  DB 1;  Length 14;
  Best Local Similarity   71.4%;  Pred. No. 18;
  Matches   10;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        115 CCTAACGACTATCC 128
              || || |||:|:||
Db          1 CCCAAAGACUAUCC 14


RESULT 20
US-08-379-079-7
; Sequence 7, Application US/08379079
; Patent No. 5665593
;  GENERAL INFORMATION:
;    APPLICANT:  Kole, Ryszard
;    APPLICANT:  Dominski, Zbigniew T.
;    TITLE OF INVENTION:  Antisense Oligonucleotides Which Combat
;    TITLE OF INVENTION:  Aberrant Splicing and Methods of Using the Same
;    NUMBER OF SEQUENCES:  7
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Kenneth D. Sibley; Bell, Seltzer, Park and
;      ADDRESSEE:  Gibson
;      STREET:  Post Office Drawer 34009
;      CITY:  Charlotte
;      STATE:  No. 5665593th Carolina
;      COUNTRY:  U.S.A.
;      ZIP:  28234
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/379,079
;      FILING DATE:
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/062,471
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Sibley, Kenneth D.
;      REGISTRATION NUMBER:  31,665
;      REFERENCE/DOCKET NUMBER:  5470-63
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  919-881-3140
;      TELEFAX:  919-881-3175
;      TELEX:  575102
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  14 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  RNA (genomic)
;    ANTI-SENSE:  YES
US-08-379-079-7

  Query Match             8.2%;  Score 10.8;  DB 1;  Length 14;
  Best Local Similarity   71.4%;  Pred. No. 18;
  Matches   10;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        115 CCTAACGACTATCC 128
              || || |||:|:||
Db          1 CCCAAAGACUAUCC 14


RESULT 21
US-08-802-384-7
; Sequence 7, Application US/08802384
; Patent No. 5916808
;  GENERAL INFORMATION:
;    APPLICANT:  Kole, Ryszard
;    APPLICANT:  Dominski, Zbigniew T.
;    TITLE OF INVENTION:  Antisense Oligonucleotides Which Combat
;    TITLE OF INVENTION:  Aberrant Splicing and Methods of Using the Same
;    NUMBER OF SEQUENCES:  7
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Kenneth D. Sibley; Bell, Seltzer, Park and
;      ADDRESSEE:  Gibson
;      STREET:  Post Office Drawer 34009
;      CITY:  Charlotte
;      STATE:  No. 5916808th Carolina
;      COUNTRY:  U.S.A.
;      ZIP:  28234
;    COMPUTER READABLE FORM:
```

```
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.25
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/802,384
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/379,079
;       FILING DATE:
;       APPLICATION NUMBER:  US/08/062,471
;       FILING DATE:
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Sibley, Kenneth D.
;       REGISTRATION NUMBER:  31,665
;       REFERENCE/DOCKET NUMBER:  5470-63
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  919-881-3140
;       TELEFAX:  919-881-3175
;       TELEX:  575102
;   INFORMATION FOR SEQ ID NO:  7:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  14 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  RNA (genomic)
;     ANTI-SENSE:  YES
US-08-802-384-7

  Query Match             8.2%;  Score 10.8;  DB 1;  Length 14;
  Best Local Similarity   71.4%;  Pred. No. 18;
  Matches   10;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        115 CCTAACGACTATCC 128
              || || |||:|:||
Db          1 CCCAAAGACUAUCC 14


RESULT 22
US-09-302-390-7
; Sequence 7, Application US/09302390
; Patent No. 5976879
;  GENERAL INFORMATION:
;    APPLICANT:  Kole, Ryszard
;    APPLICANT:  Dominski, Zbigniew T.
;    TITLE OF INVENTION:  Antisense Oligonucleotides Which Combat
;    TITLE OF INVENTION:  Aberrant Splicing and Methods of Using the Same
;    NUMBER OF SEQUENCES:  7
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Kenneth D. Sibley; Bell, Seltzer, Park and
;      ADDRESSEE:  Gibson
;      STREET:  Post Office Drawer 34009
;      CITY:  Charlotte
;      STATE:  No. 5976879th Carolina
;      COUNTRY:  U.S.A.
;      ZIP:  28234
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/302,390
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/379,079
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Sibley, Kenneth D.
;      REGISTRATION NUMBER:  31,665
;      REFERENCE/DOCKET NUMBER:  5470-63
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  919-881-3140
;      TELEFAX:  919-881-3175
;      TELEX:  575102
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  14 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  RNA (genomic)
;    ANTI-SENSE:  YES
US-09-302-390-7

  Query Match             8.2%;  Score 10.8;  DB 1;  Length 14;
  Best Local Similarity   71.4%;  Pred. No. 18;
  Matches   10;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        115 CCTAACGACTATCC 128
              || || |||:|:||
Db          1 CCCAAAGACUAUCC 14


RESULT 23
PCT-US94-05181-7
; Sequence 7, Application PC/TUS9405181
;  GENERAL INFORMATION:
;    APPLICANT:  Kole, Ryszard
;    APPLICANT:  Dominski, Zbigniew T
;    TITLE OF INVENTION:  Antisense Oligonucleotides which
;    TITLE OF INVENTION:  Combat Aberrant Splicing and Methods of Using the Same
;    NUMBER OF SEQUENCES:  7
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Kenneth D. Sibley; Bell, Seltzer, Park
;      ADDRESSEE:  and Gibson
;      STREET:  Post Office Drawer 34009
;      CITY:  Charlotte
;      STATE:  North Carolina
;      COUNTRY:  U.S.A.
;      ZIP:  28234
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US94/05181
;      FILING DATE:
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Sibley, Kenneth D
;      REGISTRATION NUMBER:  31,665
;      REFERENCE/DOCKET NUMBER:  5470-63
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  919-881-3140
;      TELEFAX:  919-881-3175
;      TELEX:  575102
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  14 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  RNA (genomic)
;    ANTI-SENSE:  YES
PCT-US94-05181-7

  Query Match             8.2%;  Score 10.8;  DB 1;  Length 14;
  Best Local Similarity   71.4%;  Pred. No. 18;
  Matches   10;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        115 CCTAACGACTATCC 128
```

```
                 || || |||:|:||
Db          1 CCCAAAGACUAUCC 14


RESULT 24
5171840-9/c
;Patent No. 5171840
;     APPLICANT: KISHIMOTO, TADAMITSU
;     TITLE OF INVENTION: RECEPTOR PROTEIN FOR HUMAN B CELL
;STIMULATORY FACTOR-2
;     NUMBER OF SEQUENCES: 11
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/07/298,694
;       FILING DATE: 19-JAN-1989
;SEQ ID NO:9:
;       LENGTH: 13
5171840-9

  Query Match             7.9%;  Score 10.4;  DB 1;  Length 13;
  Best Local Similarity   91.7%;  Pred. No. 18;
  Matches   11;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          45 GAACCTCTCTAG 56
               ||| ||||||||
Db          12 GAATCTCTCTAG 1


RESULT 25
US-08-520-194-6
; Sequence 6, Application US/08520194
; Patent No. 5681705
;  GENERAL INFORMATION:
;     APPLICANT:  Schram, James L.
;     APPLICANT:  Nadeau, James G.
;     APPLICANT:  Dean, Cheryl H.
;     TITLE OF INVENTION:  AMPLIFICATION AND DETECTION OF
;     TITLE OF INVENTION:  MYCOBACTERIUM AVIUM COMPLEX SPECIES
;     NUMBER OF SEQUENCES:  12
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Richard J. Rodrick, Becton Dickinson and
;       ADDRESSEE:  Company
;       STREET:  1 Becton Drive
;       CITY:  Franklin Lakes
;       STATE:  NJ
;       COUNTRY:  US
;       ZIP:  07417
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.25
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/520,194
;       FILING DATE:
;       CLASSIFICATION:  435
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Fugit, Donna R.
;       REGISTRATION NUMBER:  32,135
;       REFERENCE/DOCKET NUMBER:  P-3274
;  INFORMATION FOR SEQ ID NO:  6:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  11 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA (genomic)
US-08-520-194-6

  Query Match             7.6%;  Score 10;  DB 1;  Length 11;
  Best Local Similarity   100.0%;  Pred. No. 17;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          59 GACAATCCCG 68


                 ||||||||||
Db          1 GACAATCCCG 10


RESULT 26
US-08-259-148A-54
; Sequence 54, Application US/08259148A
; Patent No. 5741490
;  GENERAL INFORMATION:
;     APPLICANT:  Reyes, Gregory R.
;     APPLICANT:  Bradley, Daniel W.
;     APPLICANT:  Twu, Jr-Shin
;     APPLICANT:  Purdy, Michael A.
;     APPLICANT:  Tam, Albert W.
;     APPLICANT:  Krawczynski, Krzysztof Z.
;     APPLICANT:  Yarbough, Patrice D.
;     TITLE OF INVENTION:  Hepatitis E Virus Vaccine and Method
;     NUMBER OF SEQUENCES:  60
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Dehlinger & Associates
;       STREET:  350 Cambridge Avenue, Suite 250
;       CITY:  Palo Alto
;       STATE:  CA
;       COUNTRY:  USA
;       ZIP:  94306
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.25
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/259,148A
;       FILING DATE:  13-JUN-1994
;       CLASSIFICATION:  424
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 822,335
;       FILING DATE:  17-JAN-1992
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 505,888
;       FILING DATE:  05-APR-1990
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 420,921
;       FILING DATE:  13-OCT-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 367,486
;       FILING DATE:  16-JUN-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 336,672
;       FILING DATE:  11-APR-1989
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 208,997
;       FILING DATE:  17-JUN-1988
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Sholtz, Charles K.
;       REGISTRATION NUMBER:  38,615
;       REFERENCE/DOCKET NUMBER:  4600-0093.20
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (415) 324-0880
;       TELEFAX:  (415) 324-0960
;  INFORMATION FOR SEQ ID NO:  54:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  13 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  unknown
;       TOPOLOGY:  unknown
;     MOLECULE TYPE:  DNA
;     HYPOTHETICAL:  NO
;     ANTI-SENSE:  NO
;     ORIGINAL SOURCE:
;       INDIVIDUAL ISOLATE:  DNA sequence, Fig. 7
US-08-259-148A-54

  Query Match             7.5%;  Score 9.8;  DB 1;  Length 13;
```

Best Local Similarity 84.6%; Pred. No. 21;
Matches 11; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```
Qy          18 CTTATACTTGTAA 30
               |||||| || |||
Db           1 CTTATAATTATAA 13
```

RESULT 27
US-07-876-941A-70
; Sequence 70, Application US/07876941A
; Patent No. 5885768
; GENERAL INFORMATION:
; APPLICANT: Reyes, Gregory R.
; APPLICANT: Bradley, Daniel W.
; APPLICANT: Tam, Albert W.
; APPLICANT: Mitchell, Carl
; TITLE OF INVENTION: Hepatitis E Virus Peptide Antigen and
; TITLE OF INVENTION: Antibodies
; NUMBER OF SEQUENCES: 76
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Dehlinger & Associates
; STREET: 350 Cambridge Avenue, Suite 250
; CITY: Palo Alto
; STATE: CA
; COUNTRY: USA
; ZIP: 94306
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/876,941A
; FILING DATE: 01-MAY-1992
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 822,335
; FILING DATE: 17-JAN-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 505,888
; FILING DATE: 05-APRIL-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 420,921
; FILING DATE: 13-OCTOBER-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 367,486
; FILING DATE: 16-JUNE-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 336,672
; FILING DATE: 11-APRIL-1989
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 208,997
; FILING DATE: 17-JUNE-1988
; ATTORNEY/AGENT INFORMATION:
; NAME: Sholtz, Charles K.
; REGISTRATION NUMBER: 38,615
; REFERENCE/DOCKET NUMBER: 4600-0093.33
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 324-0880
; TELEFAX: (415) 324-0960
; INFORMATION FOR SEQ ID NO: 70:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 13 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: unknown
; TOPOLOGY: unknown
; MOLECULE TYPE: DNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; INDIVIDUAL ISOLATE: DNA sequence, Fig. 7
US-07-876-941A-70

Query Match 7.5%; Score 9.8; DB 1; Length 13;
Best Local Similarity 84.6%; Pred. No. 21;
Matches 11; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```
Qy          18 CTTATACTTGTAA 30
               |||||| || |||
Db           1 CTTATAATTATAA 13
```

Search completed: December 9, 2004, 17:25:17
Job time : 1 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: December 9, 2004, 17:28:44 ; Search time 0.001 Seconds
(without alignments)
94.582 Million cell updates/sec

Title: us-09-661-658-2
Perfect score: 131
Sequence: 1 gcctgagtataaggtgactt.....atgcctaacgactatcccttt 131

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

Searched: 13 seqs, 361 residues

Total number of hits satisfying chosen parameters: 26

Minimum DB seq length: 8
Maximum DB seq length: 100

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 14 summaries

Database : rnpbdb:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	76	58.0	94	1	US-09-883-119A-19	Sequence 19, Appl
2	30.8	23.5	38	1	US-09-231-235-61	Sequence 61, Appl
3	30.8	23.5	38	1	US-09-797-518A-61	Sequence 61, Appl
4	30.8	23.5	38	1	US-09-872-696A-61	Sequence 61, Appl
5	22.4	17.1	24	1	US-09-883-119A-17	Sequence 17, Appl
c 6	16.2	12.4	21	1	US-10-786-720-10954	Sequence 10954, A
7	16.2	12.4	21	1	US-10-786-720-10956	Sequence 10956, A
c 8	13.6	10.4	94	1	US-09-883-119A-19	Sequence 19, Appl
c 9	12	9.2	12	1	US-10-331-780-16	Sequence 16, Appl
c 10	11.8	9.0	15	1	US-09-504-231A-513	Sequence 513, App
c 11	11.8	9.0	15	1	US-09-274-553D-513	Sequence 513, App
c 12	11.4	8.7	15	1	US-10-056-414-188	Sequence 188, App
c 13	11.4	8.7	15	1	US-10-339-674-1630	Sequence 1630, Ap
c 14	11.4	8.7	15	1	US-10-440-850-368	Sequence 368, App

ALIGNMENTS

RESULT 1
US-09-883-119A-19
; Sequence 19, Application US/09883119A
; Publication No. US20030104520A1
; GENERAL INFORMATION:
; APPLICANT: The University of Texas System Board of Regents
; TITLE OF INVENTION: Regulatable, Catalytically Active Nucleic Acids
; FILE REFERENCE: 119927-1050
; CURRENT APPLICATION NUMBER: US/09/883,119A
; CURRENT FILING DATE: 2000-06-14
; PRIOR APPLICATION NUMBER: 60/212,097
; PRIOR FILING DATE: 2000-06-15

Query Match 58.0%; Score 76; DB 1; Length 94;
Best Local Similarity 100.0%; Pred. No. 0.026;
Matches 76; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 GCCTGAGTATAAGGTGACTTATACTTGTAATCTATCTAAACGGGGAACCTCTCTAGTAGA 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 GCCTGAGTATAAGGTGACTTATACTTGTAATCTATCTAAACGGGGAACCTCTCTAGTAGA 60

Qy         61 CAATCCCGTGCTAAAT 76
              ||||||||||||||||
Db         61 CAATCCCGTGCTAAAT 76
```

RESULT 2
US-09-231-235-61
; Sequence 61, Application US/09231235
; Patent No. US20020048805A1
; GENERAL INFORMATION:
; APPLICANT: Johnston, Julie C.
; APPLICANT: Sauter, Sybille L.
; APPLICANT: Hsu, David
; APPLICANT: Sheridan, Philip Lee
; APPLICANT: Hardy, Steven
; APPLICANT: Dubensky, Thomas
; APPLICANT: Yee, Jiing-Kuan

Query Match 23.5%; Score 30.8; DB 1; Length 38;
Best Local Similarity 67.6%; Pred. No. 2.9;
Matches 23; Conservative 9; Mismatches 2; Indels 0; Gaps 0;

```
Qy         74 AATTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
              | : |:|||||||:||:|::||:||||::|||||
Db          1 AGUGAUACCAGCAUCGUCUUGAUGCCCUUGGCAG 34
```

RESULT 3
US-09-797-518A-61
; Sequence 61, Application US/09797518A
; Patent No. US20020068354A1
; GENERAL INFORMATION:
; APPLICANT: Johnston, Julie C.
; APPLICANT: Sauter, Sybille L.
; APPLICANT: Hsu, David
; APPLICANT: Sheridan, Philip Lee
; APPLICANT: Hardy, Steven
; APPLICANT: Dubensky, Thomas
; APPLICANT: Yee, Jiing-Kuan

Query Match 23.5%; Score 30.8; DB 1; Length 38;
Best Local Similarity 67.6%; Pred. No. 2.9;
Matches 23; Conservative 9; Mismatches 2; Indels 0; Gaps 0;

```
Qy         74 AATTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
              | : |:|||||||:||:|::||:||||::|||||
Db          1 AGUGAUACCAGCAUCGUCUUGAUGCCCUUGGCAG 34
```

RESULT 4
US-09-872-696A-61
; Sequence 61, Application US/09872696A
; Publication No. US20030104611A1
; GENERAL INFORMATION:
; APPLICANT: Johnston, Julie C.
; APPLICANT: Sauter, Sybille L.
; APPLICANT: Hsu, David
; APPLICANT: Sheridan, Philip Lee
; APPLICANT: Hardy, Steven
; APPLICANT: Dubensky, Thomas
; APPLICANT: Yee, Jiing-Kuan

Query Match 23.5%; Score 30.8; DB 1; Length 38;
Best Local Similarity 67.6%; Pred. No. 2.9;
Matches 23; Conservative 9; Mismatches 2; Indels 0; Gaps 0;

```
Qy          74 AATTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
               | : |:|||||||:||:|::||:||||::|||||
Db           1 AGUGAUACCAGCAUCGUCUUGAUGCCCUUGGCAG 34


RESULT 5
US-09-883-119A-17
; Sequence 17, Application US/09883119A
; Publication No. US20030104520A1
; GENERAL INFORMATION:
;  APPLICANT: The University of Texas System Board of Regents
;  TITLE OF INVENTION: Regulatable, Catalytically Active Nucleic Acids
;  FILE REFERENCE: 119927-1050
;  CURRENT APPLICATION NUMBER: US/09/883,119A
;  CURRENT FILING DATE:  2000-06-14
;  PRIOR APPLICATION NUMBER: 60/212,097
;  PRIOR FILING DATE: 2000-06-15

  Query Match             17.1%;  Score 22.4;  DB 1;  Length 24;
  Best Local Similarity   95.8%;  Pred. No. 6.1;
  Matches   23;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          19 TTATACTTGTAATCTATCTAAACG 42
               ||||||| ||||||||||||||||
Db           1 TTATACTAGTAATCTATCTAAACG 24


RESULT 6
US-10-786-720-10954/c
; Sequence 10954, Application US/10786720
; Publication No. US20040191818A1
; GENERAL INFORMATION:
;  APPLICANT: Wyeth
;  APPLICANT:  O'Toole, Margot
;  APPLICANT:  Liu, Wei
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR DIAGNOSING AND TREATING AUTOIMMUNE
;  TITLE OF INVENTION:  DISEASES
;  FILE REFERENCE: 031896-023000 (AM101331L)
;  CURRENT APPLICATION NUMBER: US/10/786,720

  Query Match             12.4%;  Score 16.2;  DB 1;  Length 21;
  Best Local Similarity   85.7%;  Pred. No. 11;
  Matches   18;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          82 CAGCATCGTCTTGATGCCCTT 102
               ||||||| | |||||||| ||
Db          21 CAGCATCATGTTGATGCCATT 1


RESULT 7
US-10-786-720-10956
; Sequence 10956, Application US/10786720
; Publication No. US20040191818A1
; GENERAL INFORMATION:
;  APPLICANT: Wyeth
;  APPLICANT:  O'Toole, Margot
;  APPLICANT:  Liu, Wei
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR DIAGNOSING AND TREATING AUTOIMMUNE
;  TITLE OF INVENTION:  DISEASES
;  FILE REFERENCE: 031896-023000 (AM101331L)
;  CURRENT APPLICATION NUMBER: US/10/786,720

  Query Match             12.4%;  Score 16.2;  DB 1;  Length 21;
  Best Local Similarity   52.4%;  Pred. No. 11;
  Matches   11;  Conservative    7;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          82 CAGCATCGTCTTGATGCCCTT 102
               |||||:| : ::||:||| ::
Db           1 CAGCAUCAUGUUGAUGCCAUU 21


RESULT 8
US-09-883-119A-19/c
; Sequence 19, Application US/09883119A
; Publication No. US20030104520A1
; GENERAL INFORMATION:
;  APPLICANT: The University of Texas System Board of Regents
;  TITLE OF INVENTION: Regulatable, Catalytically Active Nucleic Acids
;  FILE REFERENCE: 119927-1050
;  CURRENT APPLICATION NUMBER: US/09/883,119A
;  CURRENT FILING DATE:  2000-06-14
;  PRIOR APPLICATION NUMBER: 60/212,097
;  PRIOR FILING DATE: 2000-06-15

  Query Match             10.4%;  Score 13.6;  DB 1;  Length 94;
  Best Local Similarity   80.0%;  Pred. No. 7.6;
  Matches   16;  Conservative    0;  Mismatches    4;  Indels    0;  Gaps    0;

Qy           6 AGTATAAGGTGACTTATACT 25
               ||||||||    ||||||||
Db          25 AGTATAAGTCACCTTATACT 6


RESULT 9
US-10-331-780-16/c
; Sequence 16, Application US/10331780
; Publication No. US20030162210A1
; GENERAL INFORMATION:
;  APPLICANT: Chetverin, Alexander B.
;  APPLICANT:  Kramer, Fred Russel
;  TITLE OF INVENTION: NOVEL OLIGONUCLEOTIDE ARRAYS AND THEIR USE FOR SORTING,
;  TITLE OF INVENTION:  ISOLATING, SEQUENCING, AND MANIPULATING NUCLEIC ACIDS
;  FILE REFERENCE: 07763-004002
;  CURRENT APPLICATION NUMBER: US/10/331,780
;  CURRENT FILING DATE:  2002-12-31

  Query Match              9.2%;  Score 12;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 15;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          76 TTATACCAGCAT 87
               ||||||||||||
Db          12 TTATACCAGCAT 1


RESULT 10
US-09-504-231A-513/c
; Sequence 513, Application US/09504231A
; Patent No. US20020013458A1
; GENERAL INFORMATION:
;  APPLICANT: Blatt, Lawrence
;  APPLICANT:  McSwiggen, James
;  APPLICANT:  Roberts, Beth
;  APPLICANT:  Pavco, Pamela
;  APPLICANT:  Macejak, Dennis
;  TITLE OF INVENTION: ENZYMATIC NUCLEIC ACID TREATMENT OF DISEASES OR CONDITIONS RELATEI
;  TITLE OF INVENTION:  HEPATITIS C VIRUS INFECTION

  Query Match              9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 16;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         104 GCAGATAAATGCCTA 118
               |||| || |||||||
Db          15 GCAGGTAGATGCCTA 1


RESULT 11
US-09-274-553D-513/c
; Sequence 513, Application US/09274553D
; Patent No. US20020082225A1
; GENERAL INFORMATION:
;  APPLICANT: Blatt, Lawrence
;  APPLICANT:  McSwiggen, James
;  APPLICANT:  Roberts, Beth
;  APPLICANT:  Pavco, Pamela
```

; APPLICANT: Macejak, Dennis
; TITLE OF INVENTION: ENZYMATIC NUCLEIC ACID TREATMENT OF DISEASES OR CONDITIONS RELATE
; TITLE OF INVENTION: HEPATITIS C VIRUS INFECTION

Query Match 9.0%; Score 11.8; DB 1; Length 15;
Best Local Similarity 86.7%; Pred. No. 16;
Matches 13; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```
Qy        104 GCAGATAAATGCCTA 118
              |||| || |||||||
Db         15 GCAGGTAGATGCCTA 1
```

RESULT 12
US-10-056-414-188/c
; Sequence 188, Application US/10056414
; Publication No. US20030003469A1
; GENERAL INFORMATION:
; APPLICANT: Stinchcomb, Dan T.
; Draper, Kenneth G.
; McSwiggen, James
; TITLE OF INVENTION: RIBOZYME TREATMENT OF
; DISEASES OR CONDITIONS
; RELATED TO LEVELS OF
; NF-KB

Query Match 8.7%; Score 11.4; DB 1; Length 15;
Best Local Similarity 92.3%; Pred. No. 16;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy         48 CCTCTCTAGTAGA 60
              ||||||||| |||
Db         14 CCTCTCTAGGAGA 2
```

RESULT 13
US-10-339-674-1630/c
; Sequence 1630, Application US/10339674
; Publication No. US20030204318A1
; GENERAL INFORMATION:
; APPLICANT: Feldmann, Richard J.; Global Determinants, Inc.
; TITLE OF INVENTION: Escherichia coli K-12 MG1655 complete genome.
; FILE REFERENCE: Jim Zegeer Law Offices - 703-684-8333
; CURRENT APPLICATION NUMBER: US/10/339,674
; CURRENT FILING DATE: 2003-06-06
; NUMBER OF SEQ ID NOS: 3537
; SOFTWARE: Proprietary

Query Match 8.7%; Score 11.4; DB 1; Length 15;
Best Local Similarity 92.3%; Pred. No. 16;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy        107 GATAAATGCCTAA 119
              |||||||||| |
Db         14 GATAAATGCCTGA 2
```

RESULT 14
US-10-440-850-368/c
; Sequence 368, Application US/10440850
; Publication No. US20030207837A1
; GENERAL INFORMATION:
; APPLICANT: Ribozyme Pharmaceuticals, Inc.
; APPLICANT: Stinchcomb, Dan
; APPLICANT: Jarvis, Thale
; APPLICANT: McSwiggen, Jim
; TITLE OF INVENTION: Method and Reagent for the Induction of Graft Tolerance and Rever
; TITLE OF INVENTION: Immune Responses
; FILE REFERENCE: 250/130 (MBHB00-900-A)

Query Match 8.7%; Score 11.4; DB 1; Length 15;
Best Local Similarity 92.3%; Pred. No. 16;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy         87 TCGTCTTGATGCC 99
              |||| ||||||||
Db         15 TCGTATTGATGCC 3
```

Search completed: December 9, 2004, 17:28:45
Job time : 1 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: December 9, 2004, 17:19:01 ; Search time 1 Seconds
(without alignments)
0.187 Million cell updates/sec

Title: us-09-661-658-2
Perfect score: 131
Sequence: 1 gcctgagtataaggtgactt.....atgcctaacgactatcccttt 131

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

Searched: 35 seqs, 712 residues

Total number of hits satisfying chosen parameters: 70

Minimum DB seq length: 8
Maximum DB seq length: 100

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 35 summaries

Database : rgedb:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	31.8	24.3	40	1	BD248913	ACCESSION:BD248913
	2	31.8	24.3	40	1	AR343402	ACCESSION:AR343402
	3	31.8	24.3	40	1	AX034867	ACCESSION:AX034867
	4	31.8	24.3	42	1	I30279	ACCESSION:I30279
	5	30.4	23.2	38	1	I30287	ACCESSION:I30287
	6	30.4	23.2	40	1	I30256	ACCESSION:I30256
	7	22.4	17.1	24	1	AX427118	ACCESSION:AX427118
c	8	15.8	12.1	20	1	AX590751	ACCESSION:AX590751
	9	15.2	11.6	20	1	DOGSCN4AB	ACCESSION:L77475
c	10	13.8	10.5	18	1	AX705641	ACCESSION:AX705641
	11	13.8	10.5	18	1	AX705643	ACCESSION:AX705643
c	12	13.8	10.5	18	1	AX822833	ACCESSION:AX822833
c	13	13.8	10.5	18	1	AX826473	ACCESSION:AX826473
	14	12.8	9.8	16	1	AX255681	ACCESSION:AX255681
c	15	12.8	9.8	17	1	AX674315	ACCESSION:AX674315
c	16	12.8	9.8	17	1	AX729684	ACCESSION:AX729684
	17	12.8	9.8	17	1	AX736832	ACCESSION:AX736832
c	18	12.8	9.8	17	1	AX758557	ACCESSION:AX758557
c	19	12.4	9.5	15	1	I39411	ACCESSION:I39411
c	20	12.4	9.5	15	1	AX635705	ACCESSION:AX635705
c	21	12	9.2	12	1	AR261549	ACCESSION:AR261549
c	22	11.8	9.0	15	1	AR033725	ACCESSION:AR033725
c	23	11.8	9.0	15	1	AR113547	ACCESSION:AR113547
c	24	11.8	9.0	15	1	BD207458	ACCESSION:BD207458
c	25	11.8	9.0	15	1	I57954	ACCESSION:I57954
	26	11.8	9.0	15	1	AR180609	ACCESSION:AR180609
c	27	11.4	8.7	15	1	AR132368	ACCESSION:AR132368
c	28	11.4	8.7	15	1	AR132369	ACCESSION:AR132369
c	29	11.4	8.7	15	1	I61634	ACCESSION:I61634
c	30	11.4	8.7	15	1	I77383	ACCESSION:I77383
c	31	11.4	8.7	15	1	I77384	ACCESSION:I77384
c	32	11.4	8.7	15	1	AR180594	ACCESSION:AR180594
c	33	11.4	8.7	15	1	AX636020	ACCESSION:AX636020
c	34	11.4	8.7	15	1	AX638102	ACCESSION:AX638102
c	35	11.4	8.7	15	1	AX638103	ACCESSION:AX638103

ALIGNMENTS

RESULT 1
BD248913
LOCUS BD248913 40 bp RNA linear PAT 17-JUL-2003
DEFINITION Test system for detecting a splicing reaction and use thereof.
ACCESSION BD248913
VERSION BD248913.1 GI:33058683
KEYWORDS JP 2002537822-A/1.
SOURCE synthetic construct
ORGANISM synthetic construct
artificial sequences.
REFERENCE 1 (bases 1 to 40)
AUTHORS Huls,C., Bauer,B., Simandi,C., Luehrmann,R., Achsel,T. and Vornlocher,H.P.
TITLE Test system for detecting a splicing reaction and use thereof
JOURNAL Patent: JP 2002537822-A 1 12-NOV-2002;
AVENTIS RESEARCH AND TECHNOLOGIES GMBH AND CO KG
COMMENT OS Artificial Sequence
PN JP 2002537822-A/1
PD 12-NOV-2002
PF 25-FEB-2000 JP 2000602811
PR 02-MAR-1999 DE 199 09 156.0
PI CHRISTOPH HULS,BETTINA BAUER,CLAUS SIMANDI,REINHARD LUEHRMANN,
PI TILMANN ACHSEL,HANS PETER VORNLOCHER
PC C12N15/09,C12Q1/68,G01N33/53,G01N33/566,G01N33/58,C12N15/00 CC Aptamer
FH Key Location/Qualifiers
FT source 1. .40
FT /organism='Artificial Sequence'.
FEATURES Location/Qualifiers
source 1. .40
/organism="synthetic construct"
/mol_type="genomic RNA"
/db_xref="taxon:32630"

Query Match 24.3%; Score 31.8; DB 1; Length 40;
Best Local Similarity 94.3%; Pred. No. 0.83;
Matches 33; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```
Qy         73 AAATTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
              || | ||||||||||||||||||||||||||||||
Db          1 AAGTGATACCAGCATCGTCTTGATGCCCTTGGCAG 35
```

RESULT 2
AR343402
LOCUS AR343402 40 bp RNA linear PAT 17-AUG-2003
DEFINITION Sequence 1 from patent US 6579681.
ACCESSION AR343402
VERSION AR343402.1 GI:33738945
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 40)
AUTHORS Huls,C., Bauer,B., Simandi,C., Luhrmann,R., Achsel,T. and Vornlocher,H.-P.
TITLE Test system for detecting a splicing reaction and use thereof
JOURNAL Patent: US 6579681-A 1 17-JUN-2003;
FEATURES Location/Qualifiers
source 1. .40
/organism="unknown"
/mol_type="unassigned RNA"

Query Match 24.3%; Score 31.8; DB 1; Length 40;
Best Local Similarity 94.3%; Pred. No. 0.83;
Matches 33; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```
Qy          73 AAATTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
               || | ||||||||||||||||||||||||||||||
Db           1 AAGTGATACCAGCATCGTCTTGATGCCCTTGGCAG 35


RESULT 3
AX034867
LOCUS       AX034867                  40 bp    RNA     linear   PAT 15-NOV-2000
DEFINITION  Sequence 1 from Patent DE19909156.
ACCESSION   AX034867
VERSION     AX034867.1  GI:11190807
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Vornlocher,H.P., Bauer,B., Simandi,C., Achsel,T., Huels,C. and
            Luehrmann,R.
  JOURNAL   Patent: DE 19909156-A 1 07-SEP-2000;
            AVENTIS RES & TECH GMBH & CO (DE)
FEATURES             Location/Qualifiers
     source          1. .40
                     /organism="synthetic construct"
                     /mol_type="unassigned RNA"
                     /db_xref="taxon:32630"
                     /note="APTAMER"

  Query Match             24.3%;  Score 31.8;  DB 1;  Length 40;
  Best Local Similarity   94.3%;  Pred. No. 0.83;
  Matches   33;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          73 AAATTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
               || | ||||||||||||||||||||||||||||||
Db           1 AAGTGATACCAGCATCGTCTTGATGCCCTTGGCAG 35


RESULT 4
I30279
LOCUS       I30279                    42 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 29 from patent US 5580737.
ACCESSION   I30279
VERSION     I30279.1  GI:1821070
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 42)
  AUTHORS   Polisky,B., Jenison,R.D. and Gold,L.
  TITLE     High-affinity nucleic acid ligands that discriminate between
            theophylline and caffeine
  JOURNAL   Patent: US 5580737-A 29 03-DEC-1996;
FEATURES             Location/Qualifiers
     source          1. .42
                     /organism="unknown"
                     /mol_type="unassigned DNA"

  Query Match             24.3%;  Score 31.8;  DB 1;  Length 42;
  Best Local Similarity   94.3%;  Pred. No. 0.88;
  Matches   33;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          73 AAATTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
               || | ||||||||||||||||||||||||||||||
Db           1 AAGTGATACCAGCATCGTCTTGATGCCCTTGGCAG 35


RESULT 5
I30287
LOCUS       I30287                    38 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 37 from patent US 5580737.
ACCESSION   I30287
VERSION     I30287.1  GI:1821078
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 38)
  AUTHORS   Polisky,B., Jenison,R.D. and Gold,L.
  TITLE     High-affinity nucleic acid ligands that discriminate between
            theophylline and caffeine
  JOURNAL   Patent: US 5580737-A 37 03-DEC-1996;
FEATURES             Location/Qualifiers
     source          1. .38
                     /organism="unknown"
                     /mol_type="unassigned DNA"

  Query Match             23.2%;  Score 30.4;  DB 1;  Length 38;
  Best Local Similarity   96.9%;  Pred. No. 1.1;
  Matches   31;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          76 TTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
               | ||||||||||||||||||||||||||||||
Db           3 TGATACCAGCATCGTCTTGATGCCCTTGGCAG 34


RESULT 6
I30256
LOCUS       I30256                    40 bp    DNA     linear   PAT 06-FEB-1997
DEFINITION  Sequence 6 from patent US 5580737.
ACCESSION   I30256
VERSION     I30256.1  GI:1821047
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 40)
  AUTHORS   Polisky,B., Jenison,R.D. and Gold,L.
  TITLE     High-affinity nucleic acid ligands that discriminate between
            theophylline and caffeine
  JOURNAL   Patent: US 5580737-A 6 03-DEC-1996;
FEATURES             Location/Qualifiers
     source          1. .40
                     /organism="unknown"
                     /mol_type="unassigned DNA"

  Query Match             23.2%;  Score 30.4;  DB 1;  Length 40;
  Best Local Similarity   96.9%;  Pred. No. 1.1;
  Matches   31;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          76 TTATACCAGCATCGTCTTGATGCCCTTGGCAG 107
               | ||||||||||||||||||||||||||||||
Db           2 TGATACCAGCATCGTCTTGATGCCCTTGGCAG 33


RESULT 7
AX427118
LOCUS       AX427118                  24 bp    DNA     linear   PAT 18-JUN-2002
DEFINITION  Sequence 18 from Patent WO0196559.
ACCESSION   AX427118
VERSION     AX427118.1  GI:21530501
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Ellington,A.D., Hesselberth,J., Marshall,K., Robertson,M.,
            Sooter,L., Davidson,E., Cox,J.C. and Reidel,T.
  TITLE     Regulatable, catalytically active nucleic acids
  JOURNAL   Patent: WO 0196559-A 18 20-DEC-2001;
            Board of Regents, The University of Texas System (US)
FEATURES             Location/Qualifiers
     source          1. .24
                     /organism="synthetic construct"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:32630"
                     /note="Primer"
```

```
  Query Match            17.1%;  Score 22.4;  DB 1;  Length 24;
  Best Local Similarity   95.8%;  Pred. No. 3.9;
  Matches   23;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         19 TTATACTTGTAATCTATCTAAACG 42
              ||||||| ||||||||||||||||
Db          1 TTATACTAGTAATCTATCTAAACG 24


RESULT 8
AX590751/c
LOCUS       AX590751                 20 bp.   DNA     linear   PAT 27-JAN-2003
DEFINITION  Sequence 191 from Patent WO02086113.
ACCESSION   AX590751
VERSION     AX590751.1  GI:27949300
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Cookson,W.O., Moffat,M.F., Allen,M. and Lench,N.
  TITLE     Enzyme and snp marker for disease
  JOURNAL   Patent: WO 02086113-A 191 31-OCT-2002;
            Isis Innovation Limited (GB)
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="synthetic construct"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:32630"
                     /note="Primer"

  Query Match            12.1%;  Score 15.8;  DB 1;  Length 20;
  Best Local Similarity   89.5%;  Pred. No. 13;
  Matches   17;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          3 CTGAGTATAAGGTGACTTA 21
              ||||| |||||||||| ||
Db         19 CTGAGAATAAGGTGACCTA 1


RESULT 9
DOGSCN4AB
LOCUS       DOGSCN4AB                20 bp    DNA     linear   STS 11-APR-1996
DEFINITION  Canis familiaris skeletal muscle sodium channel (SCN4A) STS DNA, 3'
            primer, sequence tagged site.
ACCESSION   L77475
VERSION     L77475.1  GI:1261762
KEYWORDS    STS; PCR identification; PCR primer; sequence tagged site; skeletal
            muscle sodium channel; universal mammalian STS.
SOURCE      Canis familiaris (dog)
  ORGANISM  Canis familiaris
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
REFERENCE   1  (bases 1 to 20)
  AUTHORS   Venta,P.J., Brouillette,J.A., Yuzbasiyan-Gurkan,V. and Brewer,G.J.
  TITLE     Gene-specific universal mammalian sequence-tagged sites:
            application to the canine genome
  JOURNAL   Unpublished (1996)
COMMENT     Original source text: Canis familiaris DNA.
            Gene-specific universal mammalian sequence-tagged site for SCN4A.
            Primer for the 3' end is in exon 24. Human product is 1177 bp.
            Canine product is 1100 bp. PCR conditions: 1 min, 94 C, 2 min, 57
            C, 3 min, 72 C, 35 cycles.
FEATURES             Location/Qualifiers
     source          1. .20
                     /organism="Canis familiaris"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:9615"
     primer_bind     1. .20
                     /note="PCR primer binding site"
                     /evidence=experimental
     STS             1. .20

  Query Match            11.6%;  Score 15.2;  DB 1;  Length 20;
  Best Local Similarity   85.0%;  Pred. No. 15;
  Matches   17;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy         83 AGCATCGTCTTGATGCCCTT 102
              |||| ||||  |||||||||
Db          1 AGCAGCGTCCGGATGCCCTT 20


RESULT 10
AX705641/c
LOCUS       AX705641                 18 bp    DNA     linear   PAT 04-APR-2003
DEFINITION  Sequence 310 from Patent WO03014388.
ACCESSION   AX705641
VERSION     AX705641.1  GI:29562306
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Distler,J., Model,F. and Taubert,H.
  TITLE     Method and nucleic acids for the analysis of colon cancer
  JOURNAL   Patent: WO 03014388-A 310 20-FEB-2003;
            Epigenomics AG (DE)
FEATURES             Location/Qualifiers
     source          1. .18
                     /organism="synthetic construct"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:32630"
                     /note="Detection oligonucleotide for PGR"

  Query Match            10.5%;  Score 13.8;  DB 1;  Length 18;
  Best Local Similarity   88.2%;  Pred. No. 18;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         61 CAATCCCGTGCTAAATT 77
              |||||||  ||||||||
Db         18 CAATCCCTCGCTAAATT 2


RESULT 11
AX705643
LOCUS       AX705643                 18 bp    DNA     linear   PAT 04-APR-2003
DEFINITION  Sequence 312 from Patent WO03014388.
ACCESSION   AX705643
VERSION     AX705643.1  GI:29562308
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Distler,J., Model,F. and Taubert,H.
  TITLE     Method and nucleic acids for the analysis of colon cancer
  JOURNAL   Patent: WO 03014388-A 312 20-FEB-2003;
            Epigenomics AG (DE)
FEATURES             Location/Qualifiers
     source          1. .18
                     /organism="synthetic construct"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:32630"
                     /note="Detection oligonucleotide for PGR"

  Query Match            10.5%;  Score 13.8;  DB 1;  Length 18;
  Best Local Similarity   88.2%;  Pred. No. 18;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         61 CAATCCCGTGCTAAATT 77
              |||||||  ||||||||
Db          1 CAATCCCTCGCTAAATT 17


RESULT 12
```

```
AX822833/c
LOCUS       AX822833                  18 bp    DNA     linear   PAT 11-DEC-2003
DEFINITION  Sequence 725 from Patent EP1340818.
ACCESSION   AX822833
VERSION     AX822833.1  GI:39749469
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Adorjan,P., Burger,M., Maier,S., Nimmrich,I., Becker,E., Lesche,R.,
            Rujan,T. and Schmitt,A.
  TITLE     Method and nucleic acids for the analysis of a colon cell
            proliferative disorder
  JOURNAL   Patent: EP 1340818-A 725 03-SEP-2003;
            Epigenomics AG (DE)
FEATURES             Location/Qualifiers
     source          1. .18
                     /organism="synthetic construct"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:32630"
                     /note="Detection oligonucleotide for PGR"

  Query Match             10.5%;  Score 13.8;  DB 1;  Length 18;
  Best Local Similarity   88.2%;  Pred. No. 18;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         61 CAATCCCGTGCTAAATT 77
              |||||||  ||||||||
Db         18 CAATCCCTCGCTAAATT 2


RESULT 13
AX826473/c
LOCUS       AX826473                  18 bp    DNA     linear   PAT 11-DEC-2003
DEFINITION  Sequence 725 from Patent WO03072821.
ACCESSION   AX826473
VERSION     AX826473.1  GI:39751987
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Adorjan,P., Burger,M., Maier,S., Nimmrich,I., Becker,E., Lesche,R.,
            Rujan,T. and Schmitt,A.
  TITLE     Method and nucleic acids for the analysis of a colon cell
            proliferactive disorder
  JOURNAL   Patent: WO 03072821-A 725 04-SEP-2003;
            Epigenomics AG (DE)
FEATURES             Location/Qualifiers
     source          1. .18
                     /organism="synthetic construct"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:32630"
                     /note="Detection oligonucleotide for PGR"

  Query Match             10.5%;  Score 13.8;  DB 1;  Length 18;
  Best Local Similarity   88.2%;  Pred. No. 18;
  Matches   15;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         61 CAATCCCGTGCTAAATT 77
              |||||||  ||||||||
Db         18 CAATCCCTCGCTAAATT 2


RESULT 14
AX255681
LOCUS       AX255681                  16 bp    DNA     linear   PAT 10-OCT-2001
DEFINITION  Sequence 102 from Patent WO0170982.
ACCESSION   AX255681
VERSION     AX255681.1  GI:16074736
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            artificial sequences.
REFERENCE   1
  AUTHORS   Beger,C., Barber,J. and Wong-Staal,F.
  TITLE     Brca-1 regulators and methods of use
  JOURNAL   Patent: WO 0170982-A 102 27-SEP-2001;
            Immusol Incorporated (US) ; Beger, Carmela (DE)
FEATURES             Location/Qualifiers
     source          1. .16
                     /organism="synthetic construct"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:32630"
                     /note="Synthetic oligonucleotide"

  Query Match             9.8%;  Score 12.8;  DB 1;  Length 16;
  Best Local Similarity   87.5%;  Pred. No. 20;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         84 GCATCGTCTTGATGCC 99
              |||| |||||||  |||
Db          1 GCATGGTCTTGAAGCC 16


RESULT 15
AX674315/c
LOCUS       AX674315                  17 bp    DNA     linear   PAT 27-MAR-2003
DEFINITION  Sequence 2760 from Patent WO03004526.
ACCESSION   AX674315
VERSION     AX674315.1  GI:29332663
KEYWORDS    .
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1
  AUTHORS   Telerman,A., Amson,R. and Tuijnder,M.
  TITLE     Sequences involved in phenomena of tumour suppression, tumour
            reversion, apoptosis and/or resistance to viruses and their use as
            medicines
  JOURNAL   Patent: WO 03004526-A 2760 16-JAN-2003;
            Molecular Engines Laboratories (FR)
FEATURES             Location/Qualifiers
     source          1. .17
                     /organism="Homo sapiens"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:9606"

  Query Match             9.8%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 21;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         94 GATGCCCTTGGCAGAT 109
              ||||  ||||||||||
Db         17 GATGGTCTTGGCAGAT 2


RESULT 16
AX729684/c
LOCUS       AX729684                  17 bp    DNA     linear   PAT 08-MAY-2003
DEFINITION  Sequence 1318 from Patent WO03025175.
ACCESSION   AX729684
VERSION     AX729684.1  GI:30509027
KEYWORDS    .
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1
  AUTHORS   Telerman,A., Amson,R. and Tuijnder,M.
  TITLE     Sequences involved in phenomena of tumour suppression, tumour
            reversion, apoptosis and/or virus resistance and their use as
            medicines
  JOURNAL   Patent: WO 03025175-A 1318 27-MAR-2003;
```

```
           Molecular Engines Laboratories (FR)
FEATURES             Location/Qualifiers
     source          1. .17
                     /organism="Homo sapiens"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:9606"

  Query Match             9.8%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 21;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         94 GATGCCCTTGGCAGAT 109
              ||||  ||||||||||
Db         17 GATGGTCTTGGCAGAT 2


RESULT 17
AX736832
LOCUS       AX736832                 17 bp    DNA     linear   PAT 08-MAY-2003
DEFINITION  Sequence 2422 from Patent WO03025177.
ACCESSION   AX736832
VERSION     AX736832.1  GI:30516120
KEYWORDS    .
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1
  AUTHORS   Telerman,A., Amson,R. and Tuijnder,M.
  TITLE     Sequences involved in phenomena of tumour suppression, tumour
            reversion, apoptosis and/or resistance to viruses and the use
            thereof as medicaments
  JOURNAL   Patent: WO 03025177-A 2422 27-MAR-2003;
            Molecular Engines Laboratories (FR)
FEATURES             Location/Qualifiers
     source          1. .17
                     /organism="Homo sapiens"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:9606"

  Query Match             9.8%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 21;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         86 ATCGTCTTGATGCCCT 101
              ||| |||||||| |||
Db          2 ATCTTCTTGATGTCCT 17


RESULT 18
AX758557/c
LOCUS       AX758557                 17 bp    DNA     linear   PAT 25-JUN-2003
DEFINITION  Sequence 1878 from Patent WO03040369.
ACCESSION   AX758557
VERSION     AX758557.1  GI:32253173
KEYWORDS    .
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1
  AUTHORS   Telerman,A., Amson,R. and Tuijnder,M.
  TITLE     Sequences involved in tumoral suppression, tumoral reversion,
            apoptosis and/or viral resistance phenomena and their use as
            medicines
  JOURNAL   Patent: WO 03040369-A 1878 15-MAY-2003;
            Molecular Engines Laboratories (FR)
FEATURES             Location/Qualifiers
     source          1. .17
                     /organism="Homo sapiens"
                     /mol_type="unassigned DNA"
                     /db_xref="taxon:9606"

  Query Match             9.8%;  Score 12.8;  DB 1;  Length 17;
  Best Local Similarity   87.5%;  Pred. No. 21;
  Matches   14;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         81 CCAGCATCGTCTTGAT 96
              |||| || ||||||||
Db         17 CCAGGATGGTCTTGAT 2


RESULT 19
I39411/c
LOCUS       I39411                   15 bp    DNA     linear   PAT 13-MAY-1997
DEFINITION  Sequence 449 from patent US 5616488.
ACCESSION   I39411
VERSION     I39411.1  GI:2083891
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   Sullivan,S., Draper,K.G., McSwiggen,J. and Stinchcomb,D.T.
  TITLE     IL-5 targeted ribozymes
  JOURNAL   Patent: US 5616488-A 449 01-APR-1997;
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unknown"
                     /mol_type="unassigned DNA"

  Query Match             9.5%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 20;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         31 TCTATCTAAACGGG 44
              |||||||||| |||
Db         15 TCTATCTAAAGGGG 2


RESULT 20
AX635705/c
LOCUS       AX635705                 15 bp    RNA     linear   PAT 21-FEB-2003
DEFINITION  Sequence 2844 from Patent EP1260586.
ACCESSION   AX635705
VERSION     AX635705.1  GI:28471319
KEYWORDS    .
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
REFERENCE   1
  AUTHORS   Stinchcomb,D.T., Dudycz,L.W., Chowrira,B., Grimm,S., Direnzo,A.,
            Karpeisky,A., Draper,K.G., Kisich,K., Matulic-Adamic,J.,
            Mcswiggen,J.A., Modak,A., Pavco,P., Beigelman,L., Sullivan,S.M.,
            Sweedler,D., Thompson,J.D., Tracz,D., Usman,N., Wincott,F.E. and
            Woolf,T.
  TITLE     Method and reagent for inhibiting the expression of disease related
            genes
  JOURNAL   Patent: EP 1260586-A 2844 27-NOV-2002;
            RIBOZYME PHARMACEUTICALS, INC. (US)
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unidentified"
                     /mol_type="unassigned RNA"
                     /db_xref="taxon:32644"

  Query Match             9.5%;  Score 12.4;  DB 1;  Length 15;
  Best Local Similarity   92.9%;  Pred. No. 20;
  Matches   13;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         31 TCTATCTAAACGGG 44
              |||||||||| |||
Db         15 TCTATCTAAAGGGG 2


RESULT 21
```

```
AR261549/c
LOCUS       AR261549                  12 bp    DNA     linear   PAT 29-JAN-2003
DEFINITION  Sequence 16 from patent US 6322971.
ACCESSION   AR261549
VERSION     AR261549.1  GI:28072617
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 12)
  AUTHORS   Chetverin,A.B. and Kramer,F.R.
  TITLE     Oligonucleotide arrays and their use for sorting, isolating,
            sequencing, and manipulating nucleic acids
  JOURNAL   Patent: US 6322971-A 16 27-NOV-2001;
FEATURES             Location/Qualifiers
     source          1. .12
                     /organism="unknown"
                     /mol_type="genomic DNA"

  Query Match             9.2%;  Score 12;  DB 1;  Length 12;
  Best Local Similarity   100.0%;  Pred. No. 18;
  Matches   12;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         76 TTATACCAGCAT 87
              ||||||||||||
Db         12 TTATACCAGCAT 1


RESULT 22
AR033725/c
LOCUS       AR033725                  15 bp    DNA     linear   PAT 29-SEP-1999
DEFINITION  Sequence 491 from patent US 5869253.
ACCESSION   AR033725
VERSION     AR033725.1  GI:5949330
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   Draper,K.G.
  TITLE     Method and reagent for inhibiting hepatitis C virus replication
  JOURNAL   Patent: US 5869253-A 491 09-FEB-1999;
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unknown"
                     /mol_type="unassigned DNA"

  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 23;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        104 GCAGATAAATGCCTA 118
              |||| || |||||||
Db         15 GCAGGTAGATGCCTA 1


RESULT 23
AR113547/c
LOCUS       AR113547                  15 bp    DNA     linear   PAT 16-MAY-2001
DEFINITION  Sequence 491 from patent US 6132966.
ACCESSION   AR113547
VERSION     AR113547.1  GI:14093869
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   Draper,K.G.
  TITLE     Method and reagent for inhibiting hepatitis C virus replication
  JOURNAL   Patent: US 6132966-A 491 17-OCT-2000;
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unknown"
                     /mol_type="unassigned DNA"

  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 23;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        104 GCAGATAAATGCCTA 118
              |||| || |||||||
Db         15 GCAGGTAGATGCCTA 1


RESULT 24
BD207458/c
LOCUS       BD207458                  15 bp    RNA     linear   PAT 17-JUL-2003
DEFINITION  Enzymatic nucleic acid treatment of diseases or conditions related
            to hepatitis C virus infection.
ACCESSION   BD207458
VERSION     BD207458.1  GI:33017228
KEYWORDS    JP 2002512791-A/1048.
SOURCE      unidentified
  ORGANISM  unidentified
            unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   Blatt,L., Mcswiggen,J.A., Roberts,E., Pavco,P.A. and Macejak,D.
  TITLE     Enzymatic nucleic acid treatment of diseases or conditions related
            to hepatitis C virus infection
  JOURNAL   Patent: JP 2002512791-A 1048 08-MAY-2002;
            RIBOZYME PHARMACEUTICALS INC
COMMENT     OS   Hepatitis virus (hepatitis C virus)
            PN   JP 2002512791-A/1048
            PD   08-MAY-2002
            PF   26-APR-1999 JP 2000545991
            PR   27-APR-1998 US    60/083217,18-SEP-1998 US    60/100842 PR
            25-FEB-1999 US    09/257608,23-MAR-1999 US    09/274553 PI
            LAWRENCE BLATT,JAMES A MCSWIGGEN,ELISABETH ROBERTS,PAMELA A  PI
            PAVCO,
            PI   DENNIS MACEJAK
            PC   C12N9/00,A61K31/7105,A61K38/21,A61K48/00,A61P31/12,C12N15/09,
            PC   A61K37/66,
            PC   C12N15/00
            CC   Enzymatic nucleic acid treatment of diseases or conditions  CC
                 related to
            CC   hepatitis C virus infection.
            FH   Key             Location/Qualifiers
            FT   source          1. .15
            FT                   /organism='Hepatitis virus (hepatitis C  FT
                 virus)'.
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unidentified"
                     /mol_type="genomic RNA"
                     /db_xref="taxon:32644"

  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 23;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        104 GCAGATAAATGCCTA 118
              |||| || |||||||
Db         15 GCAGGTAGATGCCTA 1


RESULT 25
I57954/c
LOCUS       I57954                    15 bp    DNA     linear   PAT 07-OCT-1997
DEFINITION  Sequence 491 from patent US 5610054.
ACCESSION   I57954
VERSION     I57954.1  GI:2483018
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
```

```
  AUTHORS   Draper,K.G.
  TITLE     Enzymatic RNA molecule targeted against Hepatitis C virus
  JOURNAL   Patent: US 5610054-A 491 11-MAR-1997;
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unknown"
                     /mol_type="unassigned DNA"

  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 23;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy        104 GCAGATAAATGCCTA 118
              |||| || |||||||
Db         15 GCAGGTAGATGCCTA 1


RESULT 26
AR180609
LOCUS       AR180609                 15 bp    DNA     linear   PAT 20-APR-2002
DEFINITION  Sequence 677 from patent US 6333152.
ACCESSION   AR180609
VERSION     AR180609.1  GI:20222642
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   Vogelstein,B., Kinzler,K.W., Zhang,L. and Zhou,W.
  TITLE     Gene expression profiles in normal and cancer cells
  JOURNAL   Patent: US 6333152-A 677 25-DEC-2001;
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unknown"
                     /mol_type="unassigned DNA"

  Query Match             9.0%;  Score 11.8;  DB 1;  Length 15;
  Best Local Similarity   86.7%;  Pred. No. 23;
  Matches   13;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         85 CATCGTCTTGATGCC 99
              ||| ||||||| |||
Db          1 CATGGTCTTGAAGCC 15


RESULT 27
AR132368/c
LOCUS       AR132368                 15 bp    DNA     linear   PAT 16-MAY-2001
DEFINITION  Sequence 793 from patent US 6194150.
ACCESSION   AR132368
VERSION     AR132368.1  GI:14121273
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   Stinchcomb,D.T., Jarvis,T. and McSwiggen,J.
  TITLE     Nucleic acid based inhibition of CD40
  JOURNAL   Patent: US 6194150-A 793 27-FEB-2001;
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unknown"
                     /mol_type="unassigned DNA"

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 25;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         87 TCGTCTTGATGCC 99
              |||| ||||||||
Db         15 TCGTATTGATGCC 3


RESULT 28
AR132369/c
LOCUS       AR132369                 15 bp    DNA     linear   PAT 16-MAY-2001
DEFINITION  Sequence 794 from patent US 6194150.
ACCESSION   AR132369
VERSION     AR132369.1  GI:14121274
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   Stinchcomb,D.T., Jarvis,T. and McSwiggen,J.
  TITLE     Nucleic acid based inhibition of CD40
  JOURNAL   Patent: US 6194150-A 794 27-FEB-2001;
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unknown"
                     /mol_type="unassigned DNA"

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 25;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         87 TCGTCTTGATGCC 99
              |||| ||||||||
Db         15 TCGTATTGATGCC 3


RESULT 29
I61634/c
LOCUS       I61634                   15 bp    DNA     linear   PAT 07-OCT-1997
DEFINITION  Sequence 188 from patent US 5658780.
ACCESSION   I61634
VERSION     I61634.1  GI:2479582
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   Stinchcomb,D.T., Draper,K.G. and McSwiggen,J.
  TITLE     Rel a targeted ribozymes
  JOURNAL   Patent: US 5658780-A 188 19-AUG-1997;
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unknown"
                     /mol_type="unassigned DNA"

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 25;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         48 CCTCTCTAGTAGA 60
              ||||||||| |||
Db         14 CCTCTCTAGGAGA 2


RESULT 30
I77383/c
LOCUS       I77383                   15 bp    DNA     linear   PAT 03-APR-1998
DEFINITION  Sequence 90 from patent US 5693532.
ACCESSION   I77383
VERSION     I77383.1  GI:3013537
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 15)
  AUTHORS   McSwiggen,J., Draper,K., Pavco,P. and Woolf,T.
  TITLE     Respiratory syncytial virus ribozymes
  JOURNAL   Patent: US 5693532-A 90 02-DEC-1997;
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unknown"
```

/mol_type="unassigned DNA"

Query Match 8.7%; Score 11.4; DB 1; Length 15;
Best Local Similarity 92.3%; Pred. No. 25;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 52 TCTAGTAGACAAT 64
||||||||||| ||
Db 15 TCTAGTAGACCAT 3

RESULT 31
I77384/c
LOCUS I77384 15 bp DNA linear PAT 03-APR-1998
DEFINITION Sequence 91 from patent US 5693532.
ACCESSION I77384
VERSION I77384.1 GI:3013538
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 15)
AUTHORS McSwiggen,J., Draper,K., Pavco,P. and Woolf,T.
TITLE Respiratory syncytial virus ribozymes
JOURNAL Patent: US 5693532-A 91 02-DEC-1997;
FEATURES Location/Qualifiers
source 1. .15
/organism="unknown"
/mol_type="unassigned DNA"

Query Match 8.7%; Score 11.4; DB 1; Length 15;
Best Local Similarity 92.3%; Pred. No. 25;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 52 TCTAGTAGACAAT 64
||||||||||| ||
Db 13 TCTAGTAGACCAT 1

RESULT 32
AR180594/c
LOCUS AR180594 15 bp DNA linear PAT 20-APR-2002
DEFINITION Sequence 662 from patent US 6333152.
ACCESSION AR180594
VERSION AR180594.1 GI:20222627
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 15)
AUTHORS Vogelstein,B., Kinzler,K.W., Zhang,L. and Zhou,W.
TITLE Gene expression profiles in normal and cancer cells
JOURNAL Patent: US 6333152-A 662 25-DEC-2001;
FEATURES Location/Qualifiers
source 1. .15
/organism="unknown"
/mol_type="unassigned DNA"

Query Match 8.7%; Score 11.4; DB 1; Length 15;
Best Local Similarity 92.3%; Pred. No. 25;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 58 AGACAATCCCGTG 70
||||||||||| ||
Db 13 AGACAATCCCATG 1

RESULT 33
AX636020/c
LOCUS AX636020 15 bp RNA linear PAT 21-FEB-2003
DEFINITION Sequence 3159 from Patent EP1260586.
ACCESSION AX636020
VERSION AX636020.1 GI:28471634
KEYWORDS .
SOURCE unidentified
ORGANISM unidentified
unclassified.
REFERENCE 1
AUTHORS Stinchcomb,D.T., Dudycz,L.W., Chowrira,B., Grimm,S., Direnzo,A., Karpeisky,A., Draper,K.G., Kisich,K., Matulic-Adamic,J., Mcswiggen,J.A., Modak,A., Pavco,P., Beigelman,L., Sullivan,S.M., Sweedler,D., Thompson,J.D., Tracz,D., Usman,N., Wincott,F.E. and Woolf,T.
TITLE Method and reagent for inhibiting the expression of disease related genes
JOURNAL Patent: EP 1260586-A 3159 27-NOV-2002;
RIBOZYME PHARMACEUTICALS, INC. (US)
FEATURES Location/Qualifiers
source 1. .15
/organism="unidentified"
/mol_type="unassigned RNA"
/db_xref="taxon:32644"

Query Match 8.7%; Score 11.4; DB 1; Length 15;
Best Local Similarity 92.3%; Pred. No. 25;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 48 CCTCTCTAGTAGA 60
||||||||| |||
Db 14 CCTCTCTAGGAGA 2

RESULT 34
AX638102/c
LOCUS AX638102 15 bp RNA linear PAT 24-FEB-2003
DEFINITION Sequence 5241 from Patent EP1260586.
ACCESSION AX638102
VERSION AX638102.1 GI:28473716
KEYWORDS .
SOURCE unidentified
ORGANISM unidentified
unclassified.
REFERENCE 1
AUTHORS Stinchcomb,D.T., Dudycz,L.W., Chowrira,B., Grimm,S., Direnzo,A., Karpeisky,A., Draper,K.G., Kisich,K., Matulic-Adamic,J., Mcswiggen,J.A., Modak,A., Pavco,P., Beigelman,L., Sullivan,S.M., Sweedler,D., Thompson,J.D., Tracz,D., Usman,N., Wincott,F.E. and Woolf,T.
TITLE Method and reagent for inhibiting the expression of disease related genes
JOURNAL Patent: EP 1260586-A 5241 27-NOV-2002;
RIBOZYME PHARMACEUTICALS, INC. (US)
FEATURES Location/Qualifiers
source 1. .15
/organism="unidentified"
/mol_type="unassigned RNA"
/db_xref="taxon:32644"

Query Match 8.7%; Score 11.4; DB 1; Length 15;
Best Local Similarity 92.3%; Pred. No. 25;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 52 TCTAGTAGACAAT 64
||||||||||| ||
Db 15 TCTAGTAGACCAT 3

RESULT 35
AX638103/c
LOCUS AX638103 15 bp RNA linear PAT 21-FEB-2003
DEFINITION Sequence 5242 from Patent EP1260586.
ACCESSION AX638103
VERSION AX638103.1 GI:28473717
KEYWORDS .
SOURCE unidentified
ORGANISM unidentified

```
            unclassified.
REFERENCE   1
  AUTHORS   Stinchcomb,D.T., Dudycz,L.W., Chowrira,B., Grimm,S., Direnzo,A.,
            Karpeisky,A., Draper,K.G., Kisich,K., Matulic-Adamic,J.,
            Mcswiggen,J.A., Modak,A., Pavco,P., Beigelman,L., Sullivan,S.M.,
            Sweedler,D., Thompson,J.D., Tracz,D., Usman,N., Wincott,F.E. and
            Woolf,T.
  TITLE     Method and reagent for inhibiting the expression of disease related
            genes
  JOURNAL   Patent: EP 1260586-A 5242 27-NOV-2002;
            RIBOZYME PHARMACEUTICALS, INC. (US)
FEATURES             Location/Qualifiers
     source          1. .15
                     /organism="unidentified"
                     /mol_type="unassigned RNA"
                     /db_xref="taxon:32644"

  Query Match             8.7%;  Score 11.4;  DB 1;  Length 15;
  Best Local Similarity   92.3%;  Pred. No. 25;
  Matches   12;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         52 TCTAGTAGACAAT 64
              |||||||||| ||
Db         13 TCTAGTAGACCAT 1


Search completed: December  9, 2004, 17:19:02
Job time : 1 secs
```

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: December 9, 2004, 17:32:23 ; Search time 0.001 Seconds
(without alignments)
21.746 Million cell updates/sec

Title: us-09-661-658-2
Perfect score: 131
Sequence: 1 gcctgagtataaggtgactt.....atgcctaacgactatcccttt 131

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

Searched: 6 seqs, 83 residues

Total number of hits satisfying chosen parameters: 12

Minimum DB seq length: 8
Maximum DB seq length: 100

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 6 summaries

Database : rnpndb:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
1		12.8	9.8	16	1	US-10-239-958-102	Sequence 102, App
c 2		11.8	9.0	15	1	US-10-964-195-5	Sequence 5, Appli
3		10	7.6	13	1	US-60-522-459-11465	Sequence 11465, A
4		9.8	7.5	13	1	US-60-522-459-9037	Sequence 9037, Ap
c 5		9.8	7.5	13	1	US-60-522-459-9179	Sequence 9179, Ap
c 6		9.8	7.5	13	1	US-60-522-459-12497	Sequence 12497, A

ALIGNMENTS

RESULT 1
US-10-239-958-102
; Sequence 102, Application US/10239958
; GENERAL INFORMATION:
; APPLICANT: BARBER, JACK
; APPLICANT: WONG-STAAL, FLOSSIE
; TITLE OF INVENTION: BRCA-1 REGULATORS AND METHODS OF USE
; FILE REFERENCE: 039316/0603
; CURRENT APPLICATION NUMBER: US/10/239,958
; CURRENT FILING DATE: 2002-09-23
; PRIOR APPLICATION NUMBER: 09/536,058
; PRIOR FILING DATE: 2000-03-23
; NUMBER OF SEQ ID NOS: 256
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 102
; LENGTH: 16
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: oligonucleotide
US-10-239-958-102

Query Match 9.8%; Score 12.8; DB 1; Length 16;
Best Local Similarity 87.5%; Pred. No. 0.52;
Matches 14; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```
Qy          84 GCATCGTCTTGATGCC 99
               |||| ||||||| |||
Db           1 GCATGGTCTTGAAGCC 16
```

RESULT 2
US-10-964-195-5/c
; Sequence 5, Application US/10964195
; GENERAL INFORMATION:
; APPLICANT: Rosenblum et al.
; TITLE OF INVENTION: Immunotoxins Directed Against c-erbB-2 (HER-2/Neu)
; TITLE OF INVENTION: Related Surface Antigens
; FILE REFERENCE: D5425CIP2
; CURRENT APPLICATION NUMBER: US/10/964,195
; CURRENT FILING DATE: 2004-10-13
; PRIOR APPLICATION NUMBER: US/09/320,156
; PRIOR FILING DATE: 1999-05-26
; PRIOR APPLICATION NUMBER: 08/404,499
; PRIOR FILING DATE: 1995-03-17
; NUMBER OF SEQ ID NOS: 14
; SEQ ID NO 5
; LENGTH: 15
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Primer directed towards 5' coding region of TAb 250
; OTHER INFORMATION: light chain
US-10-964-195-5

Query Match 9.0%; Score 11.8; DB 1; Length 15;
Best Local Similarity 86.7%; Pred. No. 0.89;
Matches 13; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```
Qy          88 CGTCTTGATGCCCTT 102
               | |||||||||||  |
Db          15 CATCTTGATGCCCAT 1
```

RESULT 3
US-60-522-459-11465
; Sequence 11465, Application US/60522459
; GENERAL INFORMATION:
; APPLICANT: ROSETTA GENOMICS LTD
; TITLE OF INVENTION: BIOINFORMATICALLY DETECTABLE GROUP OF NOVEL REGULATORY VIRAL AND
; TITLE OF INVENTION: VIRAL ASSOCIATED OLIGONUCLEOTIDES AND USES THEREOF
; FILE REFERENCE: 52904
; CURRENT APPLICATION NUMBER: US/60/522,459
; CURRENT FILING DATE: 2004-10-04
; NUMBER OF SEQ ID NOS: 15575
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 11465
; LENGTH: 13
; TYPE: RNA
; ORGANISM: Human
US-60-522-459-11465

Query Match 7.6%; Score 10; DB 1; Length 13;
Best Local Similarity 50.0%; Pred. No. 2.3;
Matches 5; Conservative 5; Mismatches 0; Indels 0; Gaps 0;

```
Qy          20 TATACTTGTA 29
               :|:||::|:|
Db           2 UAUACUUGUA 11
```

RESULT 4
US-60-522-459-9037
; Sequence 9037, Application US/60522459

```
; GENERAL INFORMATION:
;  APPLICANT: ROSETTA GENOMICS LTD
;  TITLE OF INVENTION: BIOINFORMATICALLY DETECTABLE GROUP OF NOVEL REGULATORY VIRAL AND
;  TITLE OF INVENTION:  VIRAL ASSOCIATED OLIGONUCLEOTIDES AND USES THEREOF
;  FILE REFERENCE: 52904
;  CURRENT APPLICATION NUMBER: US/60/522,459
;  CURRENT FILING DATE:  2004-10-04
;  NUMBER OF SEQ ID NOS: 15575
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 9037
;   LENGTH: 13
;   TYPE: RNA
;   ORGANISM: Human
US-60-522-459-9037

  Query Match             7.5%;  Score 9.8;  DB 1;  Length 13;
  Best Local Similarity   53.8%;  Pred. No. 2.5;
  Matches    7;  Conservative    4;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         29 AATCTATCTAAAC 41
              ||: :|: :||||
Db          1 AAUAUAUAUAAAC 13


RESULT 5
US-60-522-459-9179/c
; Sequence 9179, Application US/60522459
; GENERAL INFORMATION:
;  APPLICANT: ROSETTA GENOMICS LTD
;  TITLE OF INVENTION: BIOINFORMATICALLY DETECTABLE GROUP OF NOVEL REGULATORY VIRAL AND
;  TITLE OF INVENTION:  VIRAL ASSOCIATED OLIGONUCLEOTIDES AND USES THEREOF
;  FILE REFERENCE: 52904
;  CURRENT APPLICATION NUMBER: US/60/522,459
;  CURRENT FILING DATE:  2004-10-04
;  NUMBER OF SEQ ID NOS: 15575
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 9179
;   LENGTH: 13
;   TYPE: RNA
;   ORGANISM: Human
US-60-522-459-9179

  Query Match             7.5%;  Score 9.8;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 2.5;
  Matches   11;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         80 ACCAGCATCGTCT 92
              |||||| || |||
Db         13 ACCAGCCTCTTCT 1


RESULT 6
US-60-522-459-12497/c
; Sequence 12497, Application US/60522459
; GENERAL INFORMATION:
;  APPLICANT: ROSETTA GENOMICS LTD
;  TITLE OF INVENTION: BIOINFORMATICALLY DETECTABLE GROUP OF NOVEL REGULATORY VIRAL AND
;  TITLE OF INVENTION:  VIRAL ASSOCIATED OLIGONUCLEOTIDES AND USES THEREOF
;  FILE REFERENCE: 52904
;  CURRENT APPLICATION NUMBER: US/60/522,459
;  CURRENT FILING DATE:  2004-10-04
;  NUMBER OF SEQ ID NOS: 15575
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 12497
;   LENGTH: 13
;   TYPE: RNA
;   ORGANISM: Human herpesvirus 2
US-60-522-459-12497

  Query Match             7.5%;  Score 9.8;  DB 1;  Length 13;
  Best Local Similarity   84.6%;  Pred. No. 2.5;
  Matches   11;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         42 GGGGAACCTCTCT 54
              ||| || ||||||
Db         13 GGGAAATCTCTCT 1


Search completed: December  9, 2004, 17:32:23
Job time : 0.001 secs
```